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National Association of Purchasing Management

Report On Business®

November 1, 1989
Volume 7, Number 11

Purchasing Managers' Index Rises To 47.6%

Price Index Falls To Lowest Since December '82

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

October Report

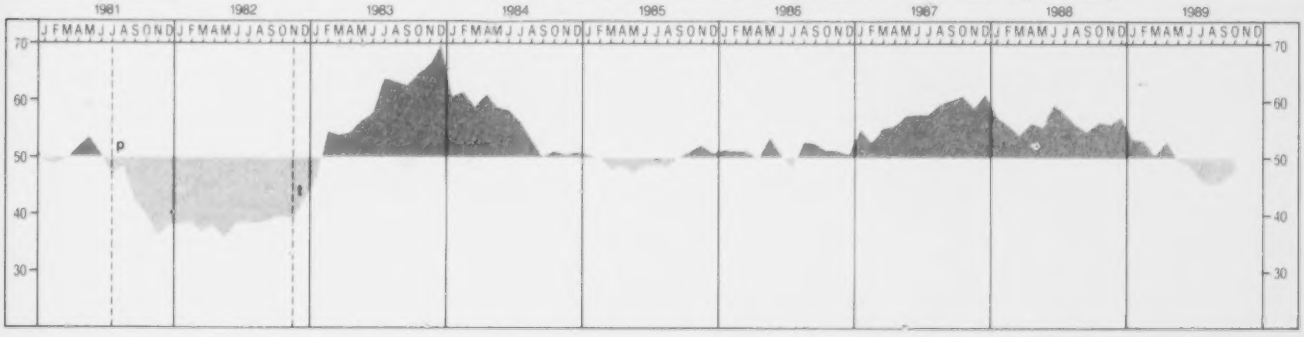
The economy declined in October for the sixth consecutive month, but at a lesser rate for the second consecutive month, say the nation's purchasing executives in their latest ***Report On Business.*** The **Production** declined for the fourth consecutive month at about the same pace as last month. **New Orders** grew in October after four consecutive months of decline. **Inventories** declined for the tenth consecutive month. **Employment** declined for the ninth consecutive month, at about the same rate as last month's decline.

New Export Orders continued to exhibit relatively strong growth, although the rate of growth was down sharply from September. Of the 73% of members exporting, 19% reported better Export Orders, down from 27% in September. The 8% reporting worse Export Orders is up from the 6% reported last month. The seasonally unadjusted index fell to 55.5% from 60.5% in September. In answer to a new question to the 73% of members who said they import, 10% indicated their overall **Imports** were higher and 12% reported lower than September. This resulted in a seasonally unadjusted index of 49.0% and suggests that Imports have registered a slight decline among manufacturers.

Prices declined for the fifth consecutive month at an even faster rate than in September. A total of 18 items was reported lower priced and only 11 higher priced. **Vendor Deliveries** were faster for the sixth consecutive month and the Vendor Deliveries index fell to 42.7%.

The **Report** was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy entered the final quarter of 1989 with the sixth consecutive monthly decline. Continued declines in Vendor Deliveries and Price indexes indicate the supply is considerably greater than demand. However, the sharp turnaround in New Orders growth, after four months of decline, hints of a possible continued easing in the overall future rate of decline in the manufacturing economy."

PURCHASING MANAGERS' INDEX



Purchasing Managers' Index (PMI)

October	56.2	May '89	49.7
November	55.9	June '89	48.8
December	57.3	July '89	46.0
January '89	53.2	August '89	45.2
February '89	53.0	September '89	46.0
March '89	50.4	October '89	47.6
April '89	53.0		

The **Purchasing Managers' Index** (PMI) rose in October to 47.6%, up from 46.0% in September. This is the sixth consecutive month of decline in the manufacturing economy. However, it is the second consecutive month in which the rate of decline was less than the previous month. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The PMI has averaged 49.3% for the first 10 months of 1989. Past experience indicates that if this average were to continue for the final two months, it would be consistent with real GNP growth of about 1.7% for all of 1989, unchanged from last month. The 1.7% does not include the additional .6% in this year's GNP, reflecting the rebound in farm production output from last year's drought. The PMI would have to fall below 44% before indicating a decline in real GNP."

Data and method of presentation

The *Report on Business* is based on data compiled from monthly replies to questions asked of purchasing executives in over 250 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty-one industries in 50 states are represented on the committee.

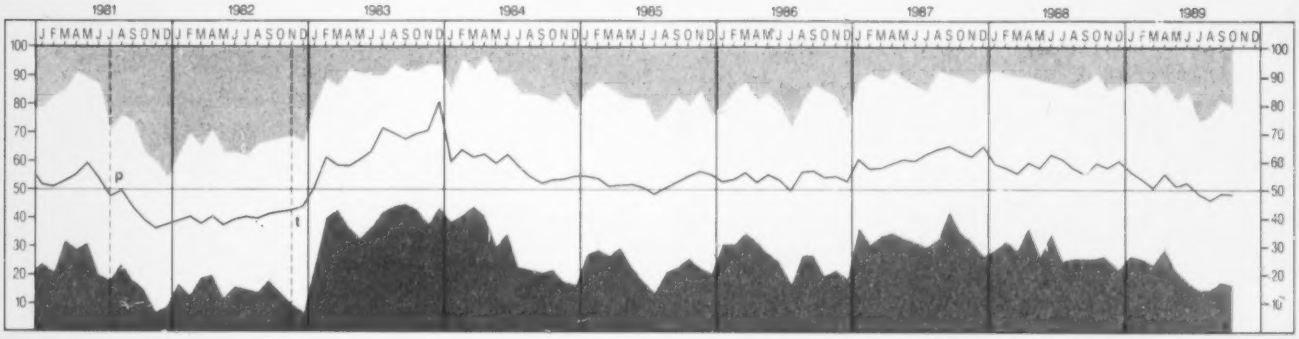
Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (new orders, production, vendor deliveries, inventories, employment and prices), this report shows:

- the percent reporting each response;
- the net difference between the number of responses in the positive economic direction (higher, better — and slower for vendor deliveries) and the negative economic direction (lower, worse — and faster for vendor deliveries);
- the diffusion index.

The charts provide a basis for comparing current data with the historical pattern. The dotted vertical lines on each chart indicate for the period shown the official peak ("P" — July 1981) and trough ("T" — November 1982) of the economy as determined by the National Bureau of Economic Research. The percentage of responses in the positive economic direction are shown in blue, the negative in red, and the same in white. Responses are raw data and are never changed. The diffusion index includes the percent of positive responses, plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to minor changes when conditions warrant them. The Purchasing Managers' Index is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (new orders, production, vendor deliveries, inventories and employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50% generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

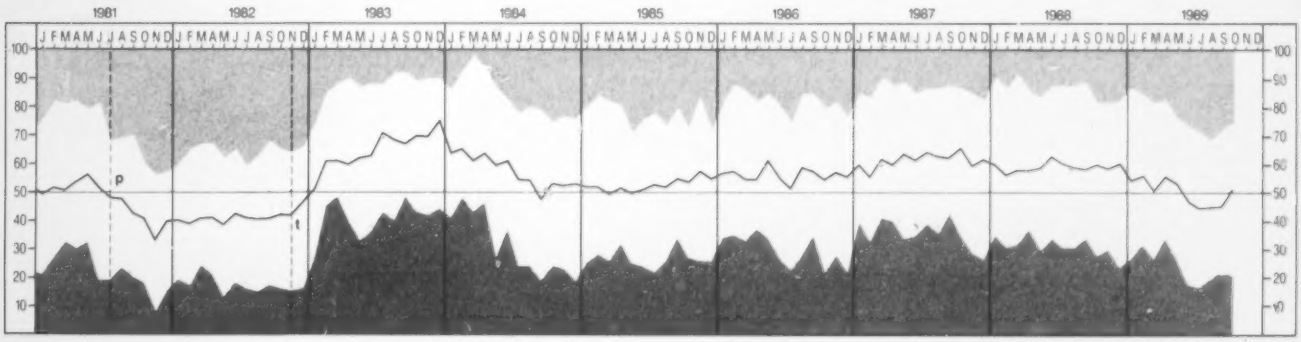
PRODUCTION



Production declined in October for the fourth consecutive month. The good news is that the rate of decline was only slightly more than in September. The Production index slipped to 48.4%, down almost imperceptibly from 48.5% in September. Other than some minor production declines, mainly in the apparel and textile industry, Hurricane Hugo appeared to have little overall impact on production.

Production	%Better	%Same	%Worse	Net	Index
October	17	62	21	– 4	48.4
September	18	64	18	0	48.5
August	15	61	24	– 9	46.5
July	15	59	26	–11	48.3

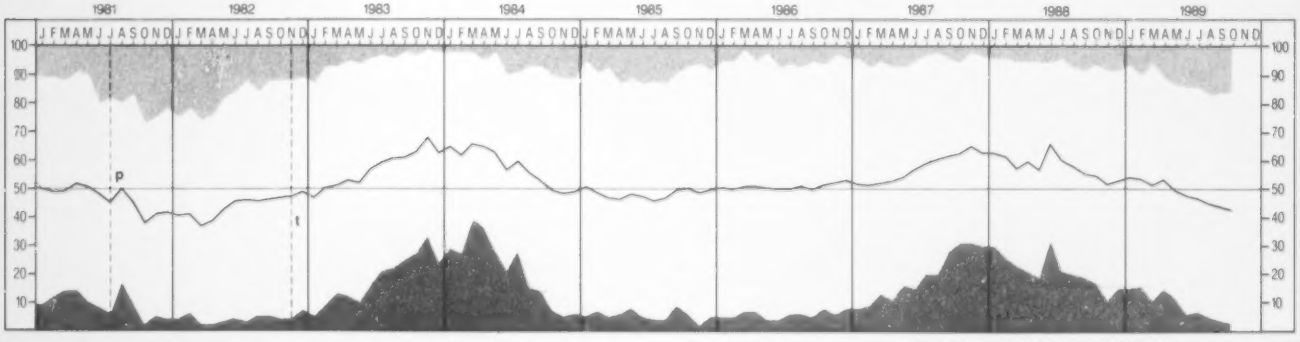
NEW ORDERS



New Orders grew in October, reversing a down trend of four consecutive months of decline. The New Order index rose to 51.4%, sharply higher than 45.4% in September. It appears that the growth in New Orders was aided by continued relatively strong growth in New Export Orders and perhaps by a slight decline in overall imports.

New Orders	%Better	%Same	%Worse	Net	Index
October	21	54	25	– 4	51.4
September	23	50	27	– 4	45.4
August	20	49	31	–11	45.1
July	17	55	28	–11	44.8

VENDOR DELIVERIES



Vendor Deliveries were faster in October for the sixth consecutive month, reflecting greater availability and continued decline in demand in the sluggish economy. The Vendor Deliveries index fell for the sixth consecutive month and, at 42.7%, is the lowest since May 1982 (42.1%). However, the number of items in short supply increased to 12, up from eight last month.

Vendor Deliveries	%Slower	%Same	%Faster	Net	Index
October	3	81	16	–13	42.7
September	4	80	16	–12	43.8
August	5	78	17	–12	44.9
July	7	79	14	– 7	46.9

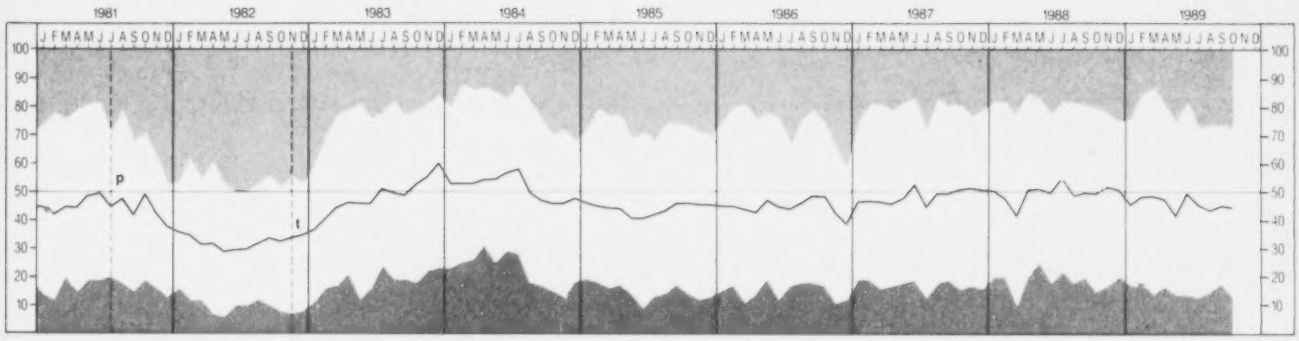
IN SHORT SUPPLY:

Bearings (15th consecutive month; a consequence of anti-dumping suits), **Castings** (11th time in 14 months), **Bleached Paperboard** (16th consecutive month, but reported off allocation), **Acetone** (a solvent for fats, oils, waxes, resins, rubber, plastics, lacquer, and varnishes) **Acrylic Acid** (15th time in 16 months; used in manufacturing plastics), **Caustic Soda/Soda Ash** (29th consecutive month; used heavily in paper-making, petroleum refining, and soap-making), **Sodium Chlorate** (5th consecutive month; used heavily in paper-making and dyeing), **Tetrahydrofuran (THF)** (heavily used as a solvent for high polymers especially polyvinyl chloride), **Titanium Dioxide** (27th consecutive month; lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications), **Polyester, Rayon, Milk/Milk Powder** (2nd consecutive month; a consequence of increased demand for dairy products, exceptionally higher government exports of nonfat dry milk, and very low import quota of nonfat dry milk; used in food processing).

UP IN PRICE:

Copper (2nd consecutive month; after being reported down in price in August for 3rd consecutive month; a consequence of mining strikes in Mexico and Peru), **Lead** (2nd consecutive month, after being reported down in price in April; used heavily in making paints, petroleum, pipe, and batteries), **Bearings** (15th time in 16 months), **Electric Motors** (3rd time in 4 months; industry is capacity restrained), **Acetone** (a solvent for fats, oils, waxes, resins, rubber, plastic lacquer, and varnishes), **Benzine** (After being reported down in price in August for 3rd consecutive month, used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins), **Caustic Soda/Soda Ash** (35th consecutive month; used heavily in paper-making, petroleum refining, and soap-making), **Titanium Dioxide** (4th time in 7 months; a lead-free pigment used as a whitener in coatings, paints, paper,

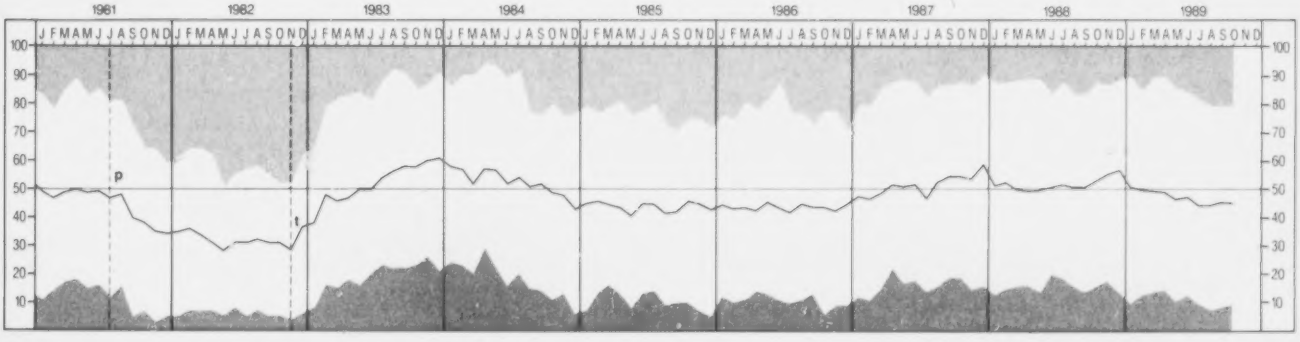
INVENTORIES



Inventories declined in October for the 10th consecutive month at a slightly greater pace than in September. The Inventories index dropped to 44.7%, down from 45.1% last month. Purchasers continue to report progress in balancing their inventories of purchased items in line with production demands.

Inventories	%Higher	%Same	%Lower	Net	Index
October	13	60	27	−14	44.7
September	18	56	26	− 8	45.1
August	15	59	26	−11	43.3
July	13	60	27	−14	45.5

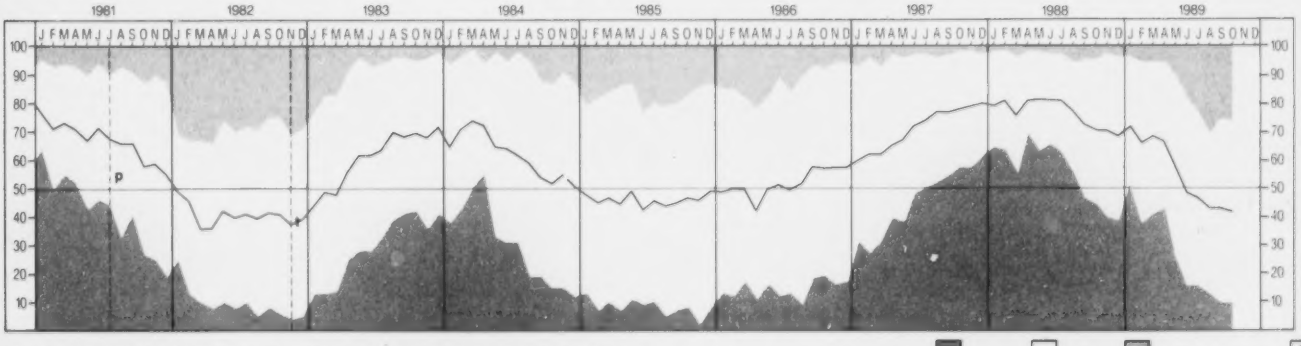
EMPLOYMENT



Employment declined in October for the ninth consecutive month at about the same rate as in September. The Employment index fell slightly to 45.8%, barely lower than 45.9% last month.

Employment	%Higher	%Same	%Lower	Net	Index
October	10	70	20	−10	45.8
September	9	71	20	−11	45.9
August	8	72	20	−12	44.7
July	10	72	18	− 8	44.4

COMMODITY PRICES



Prices declined in October for the fifth consecutive month. The rate of decline was greater in October than last month. The Price index fell to 41.9%, down from 43.1% in September, and the lowest since December 1982 (39.1%), which was the first month after our current economic recovery began.

Prices	%Higher	%Same	%Lower	Net	Index
October	10	64	26	−16	41.9
September	10	65	25	−15	43.1
August	13	57	30	−17	43.1
July	16	61	23	− 7	46.9

and other industrial applications), **Fuel Oil** (After being reported down in price in July and September), **Natural Gas** (After being reported down in price in September for 3rd consecutive month), **Milk/Milk Powder** (A consequence of increased demand for dairy products, exceptionally higher government exports of nonfat dry milk, and very low import quotas of nonfat dry milk).

DOWN IN PRICE:

Aluminum (7th consecutive month), **Nickel** (5th consecutive month; used heavily in making stainless steel, plating metals, and batteries), **Steel** (2nd consecutive month; after being reported up in price in May for 33rd time in 34 months), **Zinc** (5th time in 6 months; used heavily in metal alloys and as a protective coating for metal), **Chlorine** (2nd time in 7 months; used heavily in bleaching paper and fabrics, purifying water; and in making synthetic rubber, plastics, and other chemicals), **Ethylene** (6th consecutive month; used heavily in making ethylene oxide, plastic resins, and glycols), **Formaldehyde** (2nd time in 5 months; used heavily in making phenolic resins; and, in fungicides, disinfectants, and other chemical preparations), **Methanol** (9th time in 10 months; used heavily as a solvent and in synthesizing other chemicals), **Phenol** (3rd time in 5 months; used heavily in making phenolic resins), **Sulfur** (3rd consecutive month, used heavily in making matches, gunpowder, sulfuric acid, plastics, enamels, and bleaching woodpulp), **Plastic Resins** (3rd consecutive month; after being reported up in price in April for 20th time in 21 months), **Polyethylene Resin** (7th consecutive month; used heavily in making packaging materials and paper coatings), **Styrene** (6th consecutive month; used chiefly in making synthetic rubber, plastic resins, and plastic), **Polyvinyl Chloride (PVC)** (4th consecutive month; a rubber substitute in wire and cable coating, pipe, tubing, textile finishes, and belting), **Polypropylene** (7th time in 9 months; used in making fabrics, carpets, and yarns), **DRAMS** (3rd time in 6 months; dynamic electronic memory devices used heavily in computers), **Corn/Corn Starch** (used heavily in food processing, and in making paper), **Coffee**.

BUYING POLICY

Lead times for Production Materials remained virtually unchanged in October from September and August. The number of members reporting lead times of 30 days or less increased to 55%, up slightly from 54% in September and the same as in August.

Lead times for Capital Expenditures were somewhat shorter in October. The number of purchasers reporting lead times in the significant 6 months and longer category was 52%, down slightly from 54% in September, but the same as July and August.

Lead times for Maintenance, Repair and Operating (MRO) Supplies also shortened. The number of members reporting buying 30 days or less increased to 89%, up from the 86% reported last month, and from the 84% reported in August, which was the most since October 1986 (also 89%).

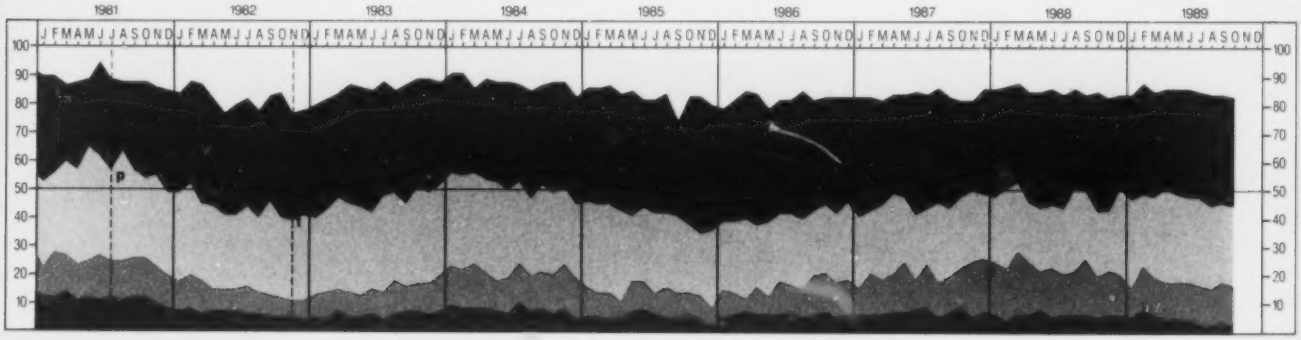
Percent Reporting

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
October	17	38	28	14	3
September	16	38	28	14	4
August	16	39	29	13	3
July	15	37	31	14	3

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
October	12	7	14	15	52
September	10	7	13	16	54
August	12	6	12	18	52
July	12	5	13	18	52

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
October	42	47	10	1	0
September	44	42	11	2	1
August	48	36	13	1	2
July	44	42	11	3	0

PRODUCTION MATERIALS



Commodity Reports
October 1989

PAPER PRODUCTS — Prepared by the NAPM Paper Committee. Chair: Richard D. Mustari, C.P.M., UARCO Incorporated, Barrington, IL.

NEWSPRINT: Readily available. Higher seasonal demand in the fourth quarter, but current open capacity and three new machines coming on-line this year will keep pricing depressed for the foreseeable future.

UNCOATED GROUNDWOOD: Demand is fairly strong with adequate availability. Overseas imports are down. Pricing will remain weak because of open capacity and availability of alternate grades of newsprint and coated groundwood.

COATED GROUNDWOOD: Shipments are down for the year, although recent months are showing an increase due to high seasonal catalog demand. Price decreases have abated and should be stable for a few months. Readily available.

UNCOATED FREESHEET: Readily available. Prices down, but stable. Discounting has abated. Excess inventories have been worked off. Mills are seeing seasonal pickup in demand. Expect good availability and reasonable pricing for the next two years.

COATED FREESHEET: Orders and backlogs are up due to the strong catalog season. Availability is and will be tight temporarily. Pricing has not changed recently. Pricing will likely decline in 1990.

PAPERBOARD/LINERBOARD: Paperboard is still in tight supply, particularly SBS. Prices are rising. Linerboard demand is up slightly. Inventories and pricing are level.

PACKAGING — Prepared by the NAPM Packaging Committee. Chair: Carl Dirkse, C.P.M., S.C. Johnson & Son, Inc., Racine, WI.

Packaging is definitely returning to a buyer's market. Significant decreases are reported in corrugated and items made from plastic resin. The one exception is folding cartons where higher prices and long lead times are being reported.

METAL CANS: All members report stable pricing and adequate supplies of metal cans except for one member who reports a price increase due to the increased cost of tin plate.

FIBRE CANS: This is a very stable market. Only one member reports increasing prices, and there continues to be an adequate supply.

GLASS: The tightness in this market seems to have pretty well disappeared. Supplies are adequate and prices are stable, although one member reports an increase.

MOLDED PLASTICS: It is difficult to keep up with the price reductions on most of the commodity resins. As a result, prices of molded products are being reduced significantly. The tightness in supply has also disappeared and as a result deliveries are improving.

FILMS: Again, prices are decreasing significantly due to the decrease in resin prices. This has also resulted in better availability.

LAMINATED STOCK: This item has also benefitted from reduced resin prices, although certain structures have increased in price due to the cost of certain components.

METAL DRUMS: There always seems to be an adequate supply of metal drums. However, a few members report price increases due to the increased cost of steel.

FIBRE DRUMS: Fibre drums continue to be available in adequate quantities. Some members report decreases due to the decreases in the cost of linerboard.

FOLDING CARTONS: Folding cartons are unique — for many years there was an oversupply and decreasing prices. However, for the last year we have seen increasing prices and limited availability. This continues to be the situation for this report.

CORRUGATED: This is another item that has seen a significant turnaround from increasing prices and tight supply to a situation where we now have adequate supply and decreasing prices. Prices should hold for the rest of the year.

BAGS: Bag prices are also benefitting from the reduced cost of plastic resins and paper. Prices are stable to decreasing and supply is adequate.

This *REPORT ON BUSINESS* is published monthly by the National Association of Purchasing Management, Inc., 2055 East Centennial Circle, Post Office Box 22160, Tempe, Arizona 85285-2160. Telephone: 602/752-NAPM (752-6276). Telecopier: 602/752-7890. NAPM is the largest purchasing education and research organization in the United States, with close to 30,000 members. The REPORT has been issued by the Association each month since 1931, except for a brief hiatus during World War II. It is distributed 12 times a year to NAPM members. Additional subscriptions are $50 a year for members, $100 for nonmembers. Add $25 outside the United States, Canada and Mexico.

Note: The next issue of *REPORT ON BUSINESS* will be available December 1, 1989.

National Association of Purchasing Management®

Report On Business®

December 1, 1989
Volume 7, Number 12

Purchasing Managers' Index Falls To 46.6%

Export Orders Up: Imports Down

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

November Report

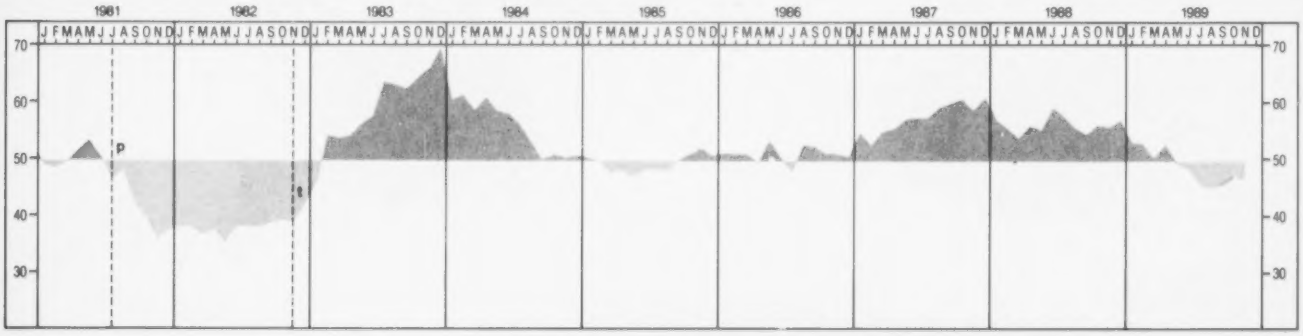
The economy deteriorated in November for the seventh consecutive month at a slightly greater rate than in the previous two months, say the nation's purchasing executives in their latest **Report on Business. Production** declined for the fifth consecutive month at a somewhat lesser rate than last month. **New Orders** declined in November after increasing in October. **Employment** declined for the 10th consecutive month, although at a lesser rate than the last four months.

The trade outlook continued to brighten. **New Export Orders** continued relatively strong. Of the 69.4% of members exporting, 16% reported better Export Orders, down from 19% in October. Only 5% reported worse Export Orders, down from 8% last month. The seasonally unadjusted Export Orders index remained the same as in October, 55.5%. Of the 76.4% of members importing, 8% reported higher **Imports** in November, down from 10% in October, while 14% reported lower Imports, up from 12% last month. The result was a drop in the seasonally unadjusted Imports index to 47.0%, down from 49.0% in October.

Prices declined for the sixth consecutive month, although at a lesser rate than in October. A total of 24 items was reported lower priced, compared to only 13 higher priced. **Inventories** declined again in November, as they have every month in 1989. **Vendor Deliveries** were faster for the seventh consecutive month, mirroring overall greater availability.

The **Report** was issued today by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy registered the seventh consecutive monthly decline in November. Except for relatively strong growth in New Export Orders, signs of weakness were confirmed by all indicators. Nowhere is the growth recession in manufacturing more clearly reflected than in the Vendor Deliveries index, which at 42.5%, is the lowest since May 1982."

PURCHASING MANAGERS' INDEX



Purchasing Managers' Index (PMI)

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December '88	57.3	July '89	46.0
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March '89	50.4	October '89	47.6
April '89	53.0	November '89	46.6
May '89	49.7		

The **Purchasing Managers' Index (PMI)** fell to 46.6% in November, down from 47.6% in October and reversing a short two month trend of easing declines. This is the seventh consecutive monthly decline in the manufacturing economy. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The PMI has averaged 49.0% for the first 11 months of 1989. Past experience indicates that if this average were to continue for the final month, it would be consistent with real GNP growth of about 1.6% for all of 1989 or 2.2% with the additional .6% in this year's GNP, reflecting the rebound in agricultural output from last year's drought. The PMI would have to fall below 44% before indicating a decline in real GNP.

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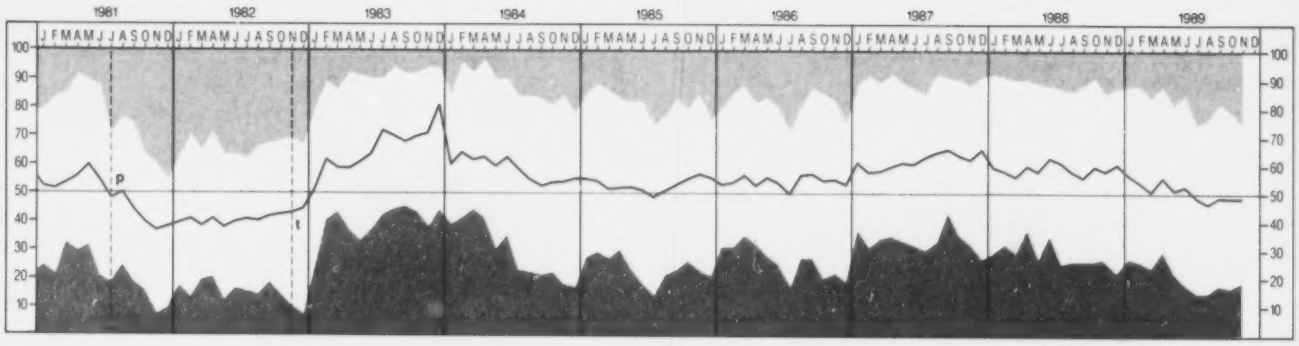
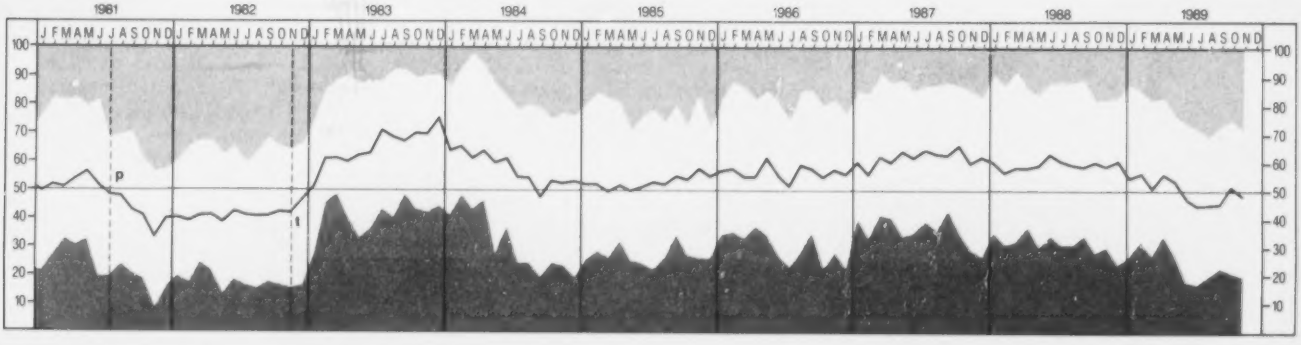
PRODUCTION



Production declined in November for the fifth consecutive month. However, the pace of the decline was not as fast as in October. The Production index rose to 48.6%, up slightly from 48.4% last month. It is at the highest level since June (52.4%).

Production	%Better	%Same	%Worse	Net	Index
November	19	56	25	– 6	48.6
October	17	62	21	– 4	48.4
September	18	64	18	0	48.5
August	15	61	24	– 9	46.5

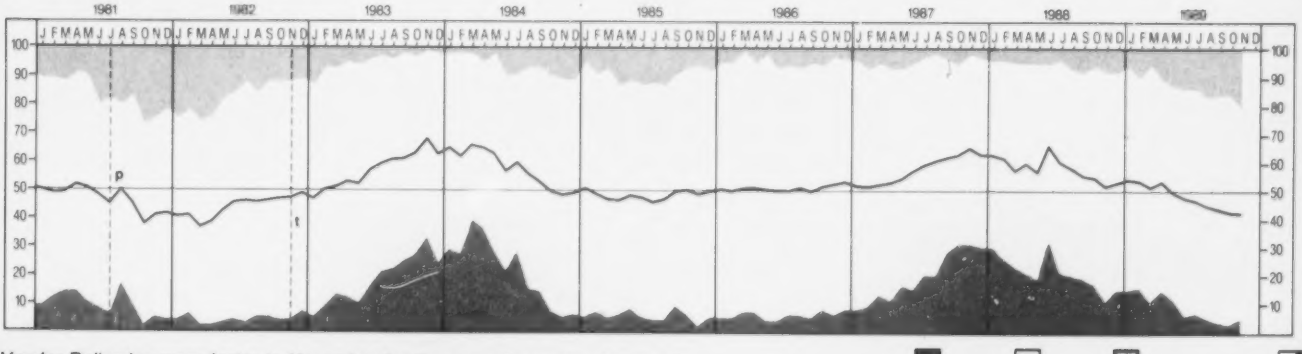
NEW ORDERS



New Orders declined in November for the fifth time in the past six months. The fall in the New Order index to 48.1% was a reversal from last month's sharply higher 51.4% and suggests a rather dismal ending to this year's manufacturing economy.

New Orders	%Better	%Same	%Worse	Net	Index
November	20	52	28	– 8	48.1
October	21	54	25	– 4	51.4
September	23	50	27	– 4	45.4
August	20	49	31	–11	45.1

VENDOR DELIVERIES



Vendor Deliveries were faster in November for the seventh consecutive month, confirming the greater availability of most items against a backdrop of continually falling demand. The Vendor Deliveries index fell slightly to 42.5%, down from 42.7% in October and is the lowest since May 1982 (42.1%). The number of items in short supply dropped to 10, down two from last month.

Vendor Deliveries	%Slower	%Same	%Faster	Net	Index
November	5	75	20	–15	42.5
October	3	81	16	–13	42.7
September	4	80	16	–12	43.8
August	5	78	17	–12	44.9

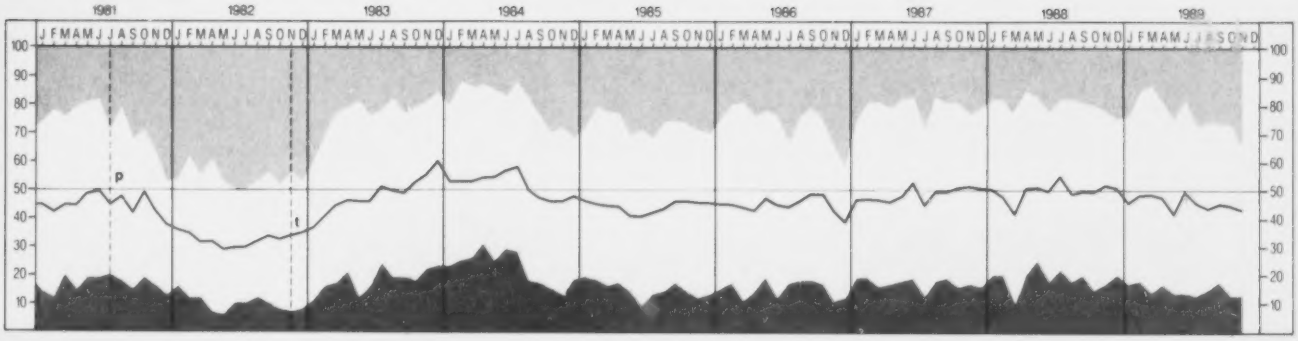
IN SHORT SUPPLY:

Bearings (16th consecutive month; a consequence of anti-dumping suits), **Castings** (12th time in 15 months), **Electric Motors** (4th time in 8 months), **Bleached Paperboard** (17th consecutive month), **Acrylic Acid** (16th time in 17 months; used in manufacturing plastics), **Caustic Soda/Soda Ash** (30th consecutive month; used heavily in paper-making, petroleum refining, and soap-making), **Sodium Chlorate** (6th consecutive month; supply exceeding increasing demand because of switching from chlorine use by paper makers to avoid dioxins; used heavily in paper-making and dyeing), **Titanium Dioxide** (28th consecutive month; lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications), **Leather, Milk/Milk Powder** (3rd consecutive month; a consequence of increased demand for dairy products, fewer dairy cows, exceptionally higher government export of nonfat dry milk, and very low import quotas; used in food processing).

UP IN PRICE:

Bearings (16th time in 17 months), **Electric Motors** (4th time in 5 months; industry is capacity restrained), **Plywood, Anilins** (used heavily in making medicinal chemicals, dyes, varnishes, resins, perfumes, and vulcanizing rubber), **Benzine** (2nd consecutive month), **Caustic Soda/Soda Ash** (36th consecutive month; primarily as consequence of lower demand for co-produced chlorine by paper makers), **Freon** (used as a refrigerant), **Silicon Wafers** (used in making semiconductors and intergrated circuits), **Polyester** (after being reported lower priced in June for 7th consecutive month), **Fuel Oil** (2nd consecutive month; after being reported down in price in July and September), **Natural Gas** (2nd consecutive month), **Milk/Milk Powder** (2nd consecutive month), **Sugar.**

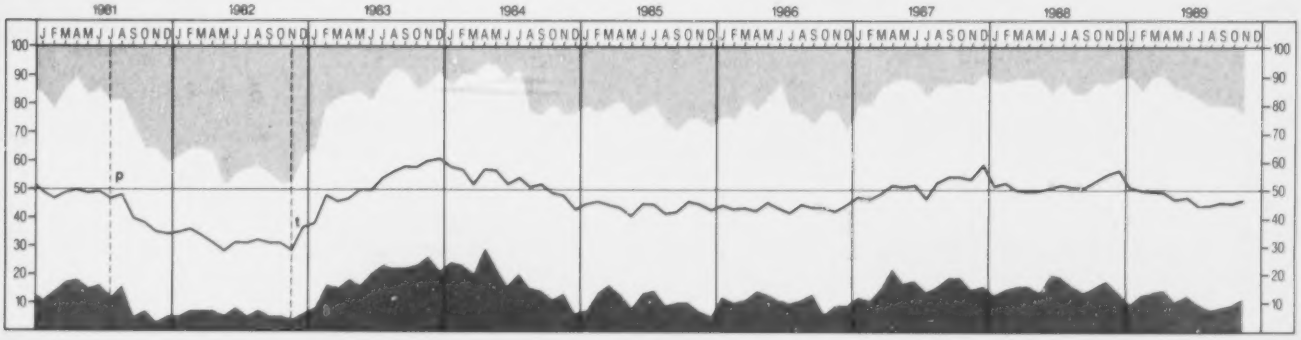
INVENTORIES



Inventories declined in November as they did in every month in 1989. The Inventories index fell to 43.1%, down from 44.7% in October, and the lowest since May (41.9%). Purchasers reported plans to pare inventory further in December, historically one of the lowest inventory months of the year.

Inventories	%Higher	%Same	%Lower	Net	Index
November	13	53	34	−21	43.1
October	13	60	27	−14	44.7
September	18	56	26	− 8	45.1
August	15	59	26	−11	43.3

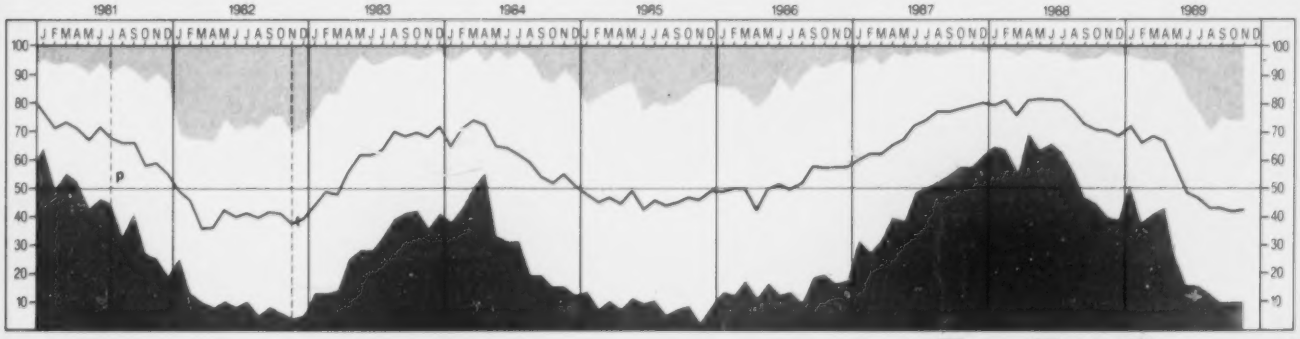
EMPLOYMENT



Employment declined in November for the 10th consecutive month. However, the rate of decline was not as great as in the past four months. The Employment index rose to 46.8%, up a full point from 45.8% in October and the highest since June (47.4%).

Employment	%Higher	%Same	%Lower	Net	Index
November	12	65	23	−11	46.8
October	10	70	20	−10	45.8
September	9	71	20	−11	45.9
August	8	72	20	−12	44.7

COMMODITY PRICES



Prices declined in November for the sixth consecutive month, although at a lesser rate than in October. The Price index rose to 42.7%, up from 41.9% last month. Except for last month, the index at 42.7% is the lowest since June 1985 (42.4%).

Prices	%Higher	%Same	%Lower	Net	Index
November	10	64	26	−16	42.7
October	10	64	26	−16	41.9
September	10	65	25	−15	43.1
August	13	57	30	−17	43.1

DOWN IN PRICE:

Aluminum (8th consecutive month), **Aluminum Products, Copper** (After being reported up in price for 2 consecutive months in October), **Nickel** (6th consecutive month; used heavily in making stainless steel, plating metals and batteries), **Steel** (3rd consecutive month; after being reported up in price in May for 33rd time in 34 months), **Steel Scrap, Ferro Alloys** (2nd time in 4 months; used heavily as a coating for welding rods), **Zinc** (6th time in 7 months; used heavily in metal alloys and as a protective coating for metal), **Printing Paper,** (4th time in 5 months; after being reported up in price in April for 25th time in 28 months), **Chlorine** (3rd time in 8 months; primarily a consequence of lower demand by paper-makers switching to alternatives to avoid dioxins while demand for co-produced caustic soda continues; used heavily in bleaching paper and fabrics, purifying water, and in making synthetic rubber, plastics, and other chemicals), **Ethylene** (7th consecutive month; used heavily in making ethylene oxide, plastic resins, and glycols), **Ethylene Glycol** (used heavily in making anti-freeze, brake fluid, plastic paint, and ink), **Propylene Glycol** (used heavily in making plastic resins, as a non-toxic anti-freeze in foods, a solvent for pharmaceuticals, and substitute for ethylene glycol), **Formaldehyde** (3rd time in 6 months; used heavily in making phenolic resins; and, in fungicides, disinfectants, and other chemical preparations), **Methanol** (10th time in 11 months; used heavily as a solvent and in synthesizing other chemicals), **Phenol** (4th time in 6 months; used heavily in making phenolic resins), **Plastic Resins** (4th consecutive month; after being reported up in price in April for 20th time in 21 months), **Polyethylene Resin** (8th consecutive month; used heavily in making packaging materials and paper coatings), **Styrene** (7th consecutive month; used chiefly in making synthetic rubber, plastic resins, and plastic), **Fiberglass** (used heavily in making glass wool, yarns, textiles, structures, and insulation), **Polyvinyl Chloride (PVC)** (5th consecutive month; used in wire and cable coating, pipe, tubing, textile finishes, and belting), **Polypropylene** (8th time in 10 months; used in making fabrics, carpets, and yarns), **DRAMS** (4th time in 7 months; dynamic electronic memory devices used heavily in computers), **Cocoa** (used in food processing), **Orange Juice.**

BUYING POLICY

Lead times for Capital Expenditures remained virtually unchanged in November. The number of purchasers reporting lead times in the significant six months and longer category was 52%, the same as in October.

Lead times for Production Materials increased slightly. The number of members reporting lead times of 30 days or less fell to 53%, down from 55% in October and 54% in September.

Lead times for Maintenance, Repair and Operating (MRO) Supplies also lengthened to some extent. The number of members reporting lead times of 30 days or less dropped to 85%, down from 89% last month, which was the most since October 1986 (also 89%).

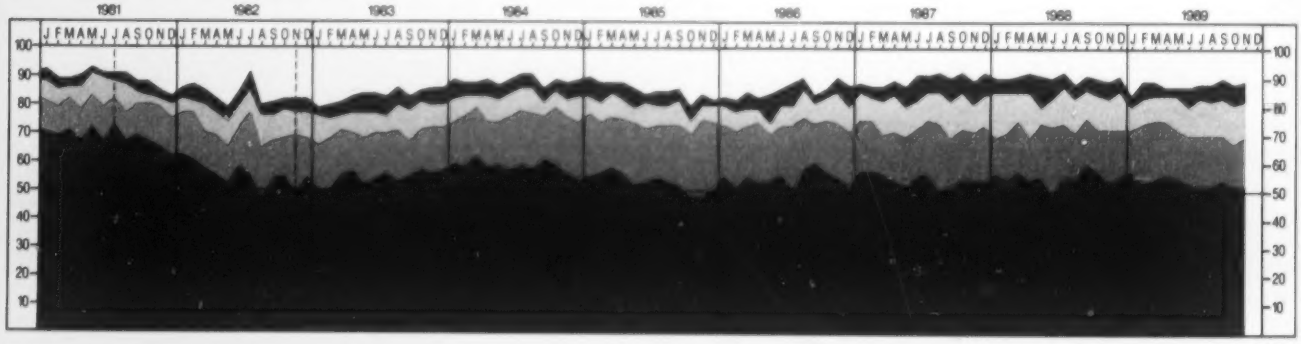
Percent Reporting

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
November	11	7	13	17	52
October	12	7	14	15	52
September	10	7	13	16	54
August	12	6	12	18	52

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
November	18	35	28	14	5
October	17	38	28	14	3
September	16	38	28	14	4
August	16	39	29	13	3

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
November	42	43	12	2	1
October	42	47	10	1	0
September	44	42	11	2	1
August	48	36	13	1	2

CAPITAL EXPENDITURES



Commodity Reports
November 1989

ENERGY — Prepared by the NAPM Energy Committee. Chair, Howard T. Perley, C.P.M., International Paper, Memphis, TN.

PETROLEUM PRODUCTS: Supply and demand for crude oil seem to be reasonably balanced at current world production levels. Prices have stabilized within a fairly narrow range. For the next several months, No. 6 residual fuel oil, No. 2 heating oil, No. 2 diesel oil and motor gasoline should follow their normal seasonal pricing patterns.

NATURAL GAS: The surplus availability of gas from existing wells is rapidly diminishing as evidenced by interruptions and price jumps already experienced this winter. For a long time, surplus gas has kept the spot market price below its true replacement cost. When new wells are drilled, sustained price increases will be inevitable. Expect higher gas prices in 1990.

ELECTRIC POWER: Rates of most electric utilities have become fairly stable as a result of stable fuel prices, and few if any plans for future construction of new power plants. Demand continues to edge upward, and many utilities are concerned about future shortages unless non-utility generators can fill the gap.

COAL: As the Pittston strike continues, prices have stiffened for the first time in many years. Observers disagree on whether they will remain firm or soften again after the strike is over. Continuing overcapacity, however, points to little risk, of further price increases after production resumes.

STEEL — Prepared by the NAPM Steel Buyers Group. Prepared by Patrick C. Conroy, Valmont Industries.

The market has again reminded all of us in the seller, user arena that we shouldn't burn bridges.

After almost a year and one-half of strength, the mills have seen the market go sour, with serious declines beginning in late August, led by sluggish auto sales. The displacement of those automotive tons has upset the hot rolled price, with the market coming down from $20 to $40 per ton this fall, with cold rolled and coated products maintaining but hesitant.

The reports showed that things were changing as the steel survey indicated users were sitting comfortably with 1–2 months inventory still on hand. Overwhelmingly, they expect their next three months of receipts will be less, and 94% said they would be reducing their inventories in the next six months.

In answering the question on whether a shortage of steel products was expected in the next six months, 82% responded no; the strongest response in over two years.

Foreign steel can't be blamed for any of the domestic declines in orders, as responses to the steel survey said foreign prices were slightly above domestic and there was no change in the competitive activity.

Pure plate products seem to be holding up pretty well with strength continuing in the bridge, railroad cars and barge markets, but strip mill products are following the hot rolled path of declines.

Mini-mill bar and angle has remained fairly stable since second quarter price declines, but there are signs that the market could weaken further. Scrap has been tracking down in recent months with the composite Metal Market price hitting a new low for 1989 at under $100.

A surprise price announcement was made by L.T.V., with hot rolled, cold rolled, and coated increases to be effective January 1. Perhaps the logic was that with no demand there would be little resistance other than verbal, and if the mills can just get into the first quarter, the traditional strongest quarter will carry them. There seems little else to support a move in price at this time.

This *REPORT ON BUSINESS* is published monthly by the National Association of Purchasing Management, Inc., 2055 East Centennial Circle, Post Office Box 22160, Tempe, Arizona 85285-2160. Telephone: 602/752-NAPM (752-6276). Telecopier: 602/752-7890. NAPM is the largest purchasing education and research organization in the United States, with close to 30,000 members. The REPORT has been issued by the Association each month since 1931, except for a brief hiatus during World War II.

Note: The next issue of *REPORT ON BUSINESS* will be available January 2, 1990.

Economic Decline Eases in December; PMI Rises to 48%

DECEMBER REPORT

The economy declined in December for the eighth consecutive month, but at the lowest rate of decline since June 1989, say the nation's purchasing executives in their latest **Report on Business.** Aided by the year's most favorable seasonal adjustment factors, both the Production and New Orders indexes registered slight increases.

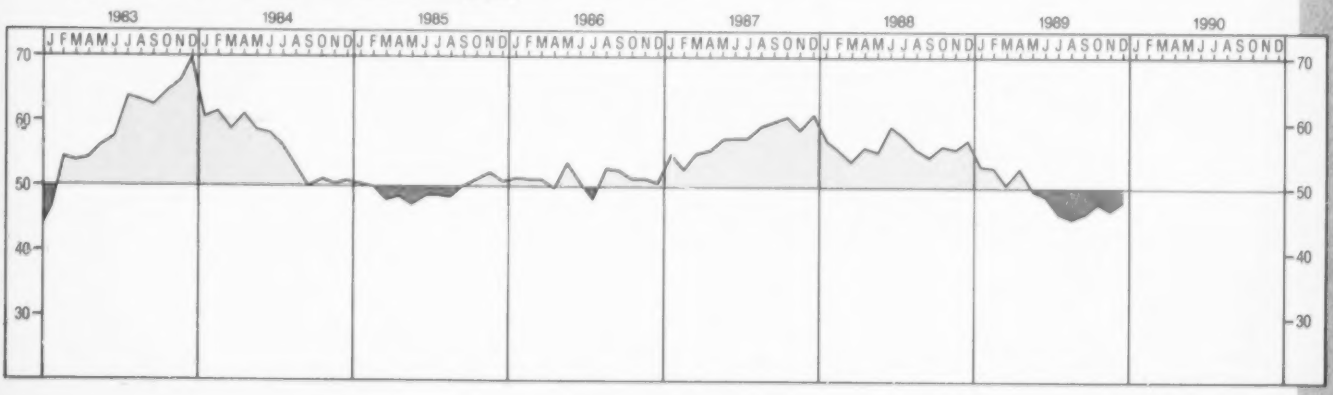
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

New Export Orders continued to expand, although the rate of growth was down from the previous month. Imports declined for the third consecutive month. Inventories declined, but at a lesser rate than in the past five months.

There was continued bright news concerning inflation. Prices declined for the seventh consecutive month at a slightly higher rate than last month. A total of 27 items were reported lower in price, compared to only 14 higher priced. Vendor Deliveries were faster for the eighth consecutive month and continues to reflect greater overall availability against a backdrop of slowing demand.

The **Report** was recently issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy marked the eighth consecutive monthly decline in December. Although the year ending Purchasing Managers' Index at 48.0% was the highest since June 1989 (48.8%), the steady declines in both the Vendor Deliveries index and Price index confirms a continued weakness in the underlying economy in this, the eighth year of the recovery."

PURCHASING MANAGERS' INDEX

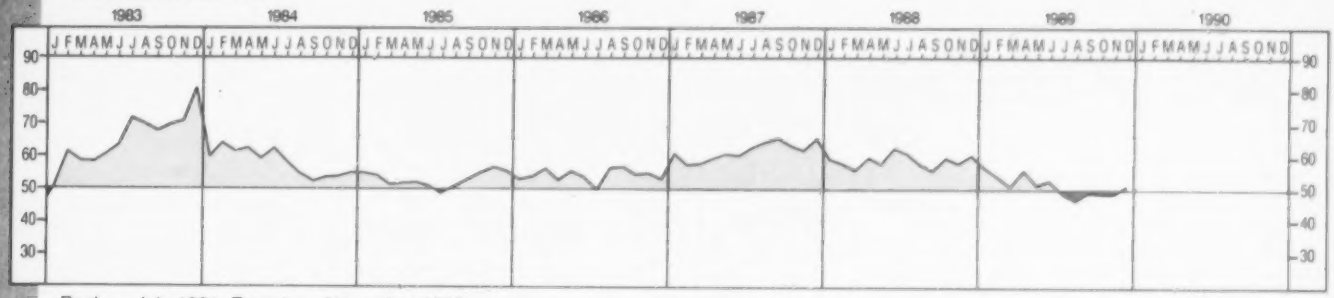


PURCHASING MANAGERS' INDEX (PMI)

December '88	57.3	July '89	46.0
January '89	53.2	August '89	45.2
February '89	53.0	September '89	46.0
March '89	50.4	October '89	47.6
April '89	53.0	November '89	46.6
May '89	49.7	December '89	48.0
June '89	48.8		

The **Purchasing Managers' Index** (PMI) rose in December to 48.0%, up from 46.6% in November. Although the 48.0% is the highest this indicator has been since June 1989 (48.8%), it is also the eighth consecutive monthly decline in the manufacturing economy. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The PMI has averaged 49.0% for all of 1989. Based on past experience, this is consistent with real GNP growth of about 1.6%, or 2.2% after adding the additional .6% in this year's GNP to reflect the rebound in agricultural output from last year's drought. The PMI would have to fall below 44% before indicating a decline in real GNP."

PRODUCTION

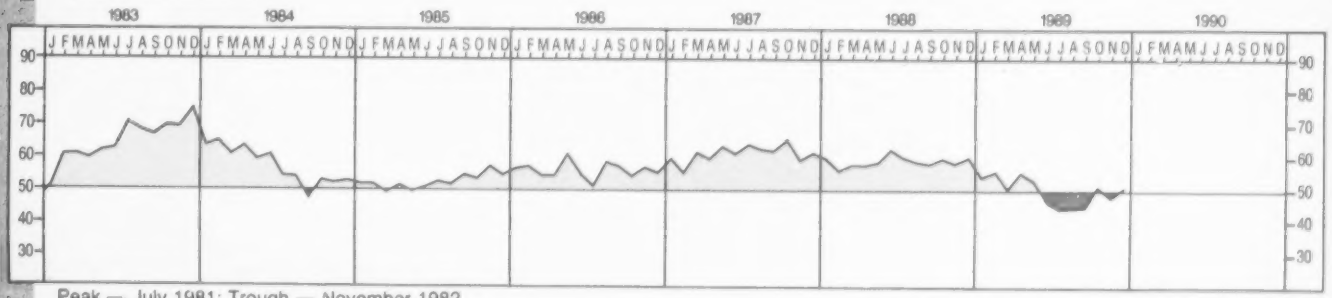


Peak — July 1981; Trough — November 1982.

Production increased in December after five consecutive months of decline which began in July 1989. The Production index rose to 50.6%, a full two points higher than November (48.6%). It is at the highest level since June 1989 (52.4%).

Production	%Better	%Same	%Worse	Net	Index
December	17	58	25	– 8	50.6
November	19	56	25	– 6	48.6
October	17	62	21	– 4	48.4
September	18	64	18	0	48.5

NEW ORDERS

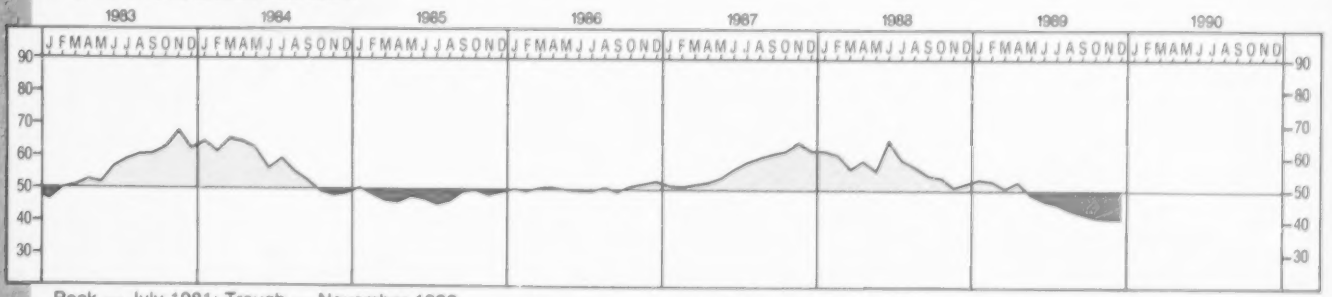


Peak — July 1981; Trough — November 1982.

New Orders increased in December after declining last month. The New Orders index rose to 50.4%, up more than two points from 48.1% in November. This is the second month the New Orders index has risen above 50% since it first declined in June 1989 after registering 48 consecutive months of growth.

New Order	%Better	%Same	%Worse	Net	Index
December	17	56	27	– 10	50.4
November	20	52	28	– 8	48.1
October	21	54	25	– 4	51.4
September	23	50	27	– 4	45.4

VENDOR DELIVERIES



Peak — July 1981; Trough — November 1982.

Vendor Deliveries were faster in December for the eighth consecutive month. The Vendor Deliveries index inched lower to 42.2%, down from 42.5% in November and is the lowest since May 1982 (42.1%). The number of items in short supply increased to 13 from 10 in November.

Vendor Deliveries	%Slower	%Same	%Faster	Net	Index
December	4	78	18	– 14	42.2
November	5	75	20	– 15	42.5
October	3	81	16	– 13	42.7
September	4	80	16	– 12	43.8

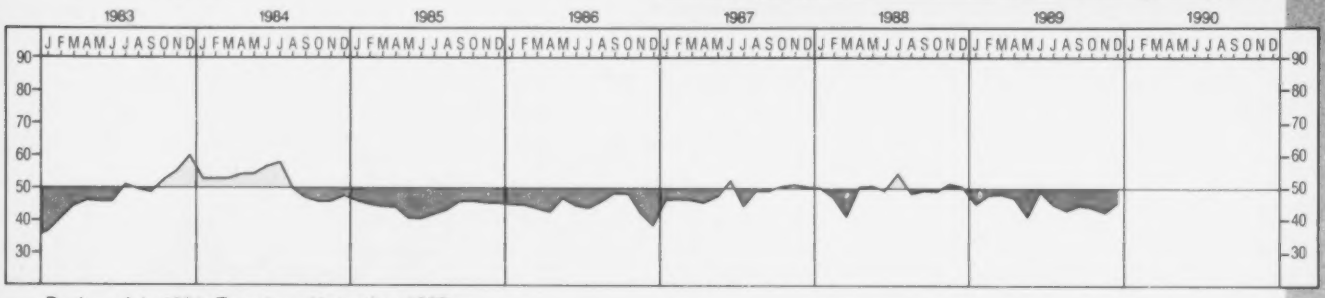
IN SHORT SUPPLY

Bearings — 17th consecutive month; a consequence of antidumping suits; **Castings** — 13th time in 16 months; **Electric Motors** — 5th time in 9 months; **Bleached Paperboard** — 18th consecutive month; **Acetonitrile** — (used to remove tars, phenols, and coloring matter from certain petroleum and to extract fatty acids from animal and vegetable oils); **Caustic Soda**; **Soda Ash** — 31st consecutive month (used heavily in papermaking, petroleum refining, and soap-making); **Hydrogen Peroxide** — (increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins; used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic); **Melamine** — (used mainly to form synthetic resins with formaldehyde); **Sodium Chlorate** — 7th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used heavily in paper-making and dyeing); **Titanium Dioxide** — 29th consecutive month (lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Nylon**; **Rayon**; **Milk/Milk Powder** — 4th consecutive month; a consequence of increased demand for dairy products, fewer dairy cows, exceptionally higher government exports of nonfat dry milk, and very low import quotas of nonfat dry milk (used in food processing).

UP IN PRICE

Bearings — 17th time in 18 months; **Castings** — 12th time in 17 months; **Electric Motors** — 5th time in 6 months; **Hydraulics**; **Switches**; **Benzins** — 3rd consecutive month (used heavily in making medicinal chemicals, dyes, varnishes, lacquers and resins); **Caustic Soda**/**Soda Ash** — 37th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper makers (used heavily in paper-making, petroleum refining and soap making); **Freon** — 2nd consecutive month (used as a refrigerant); **Polyethylene Resins** — primarily as a consequence of shortages caused by explosion at Phillips Petroleum plant reducing about 8% of U.S. polyethylene resin output until mid 1990; **Silicon Wafers** — 2nd consecutive month (used in making semiconductors and integrated circuits); **Coal**; **Fuel Oil** — 3rd consecutive month; **Natural Gas** — 3rd consecutive month; **Sugar** — 2nd consecutive month.

INVENTORIES

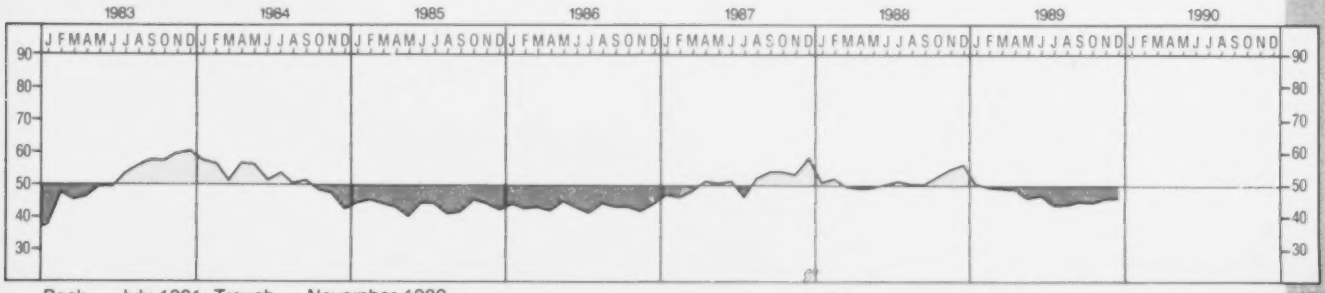


Peak — July 1981; Trough — November 1982.

Inventories declined in December, marking a full year of monthly declines. The Inventories index rose to 45.5%, or more than two points higher than last month (43.1%). The increase in the index from November to December is a reversal from the past three years, in which the index dropped in December due to manufacturers reducing their year-end inventory levels.

Inventories	%Higher	%Same	%Lower	Net	Index
December	15	55	30	−15	45.5
November	13	53	34	−21	43.1
October	13	60	27	−14	44.7
September	18	56	26	− 8	45.1

EMPLOYMENT

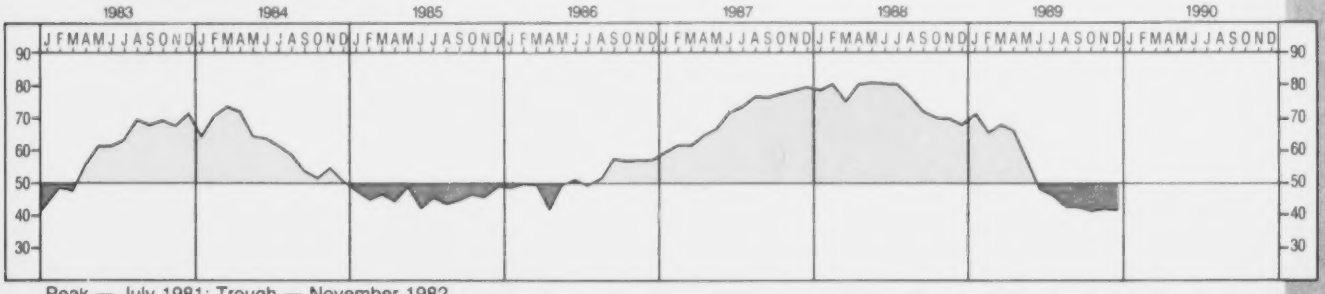


Peak — July 1981; Trough — November 1982.

December marked the 11th consecutive month in which manufacturing employment declined. However, as in the previous two months, the rate of decline was not as great as the past month. The Employment index rose imperceptibly to 46.9%, up from 46.8% in November, and the highest since June 1989 (47.4%).

Employment	%Higher	%Same	%Lower	Net	Index
December	8	69	23	−15	46.9
November	12	65	23	−11	46.8
October	10	70	20	−10	45.8
September	9	71	20	−11	45.9

COMMODITY PRICES



Peak — July 1981; Trough — November 1982.

Prices declined in December for the seventh consecutive month, at a somewhat faster pace than in November. The Price index fell to 41.9%, down from November (42.7%) and along with October (also 41.9%) is the lowest since June 1985 (42.4%). This is an encouraging trend toward lower inflation as is the ratio of items reported lower priced (27) to those reported higher priced (14).

Prices	%Higher	%Same	%Lower	Net	Index
December	10	63	27	−17	41.9
November	10	64	26	−16	42.7
October	10	64	26	−16	41.9
September	10	65	25	−15	43.1

DOWN IN PRICE

Aluminum — 9th consecutive month; **Aluminum Products** — 2nd consecutive month; **Copper** — 2nd consecutive month after being reported up in price for 2 consecutive months in October 1989; **Nickel** — 7th consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Steel** — 4th consecutive month, after being reported up in price in May 1989 for 33rd time in 34 months; **Steel Scrap** — 2nd consecutive month; **Stainless Steel** — After being reported up in price for the 15th time in 20 months in July 1989; **Zinc** — 7th time in 8 months (used heavily in metal alloys and as a protective coating for metal); **Printing Paper** — 5th time in 6 months, after being reported up in price in April 1989 for 25th time in 28 months; **Linenboard Medium** — (used heavily in making corrugated shipping cartons); **Chlorine** — 4th time in 9 months; primarily a consequence of lower demand by paper-makers switching to alternatives to avoid dioxins while demand for co-produced caustic soda continues (used heavily in bleaching paper and fabrics, purifying water, and, in making synthetic rubber, plastics and other chemicals); **Ethylene** — 8th consecutive month (used heavily in making ethylene oxide, plastic resins and glycols); **Ethylene Derivatives**; **Ethylene Glycol** — 2nd consecutive month (used heavily in making anti-freeze, brake fluid, plastic paint, and ink); **Propylene Glycol** — 2nd consecutive month (used heavily in making plastic resins, as a non-toxic anti-freeze in foods, a solvent for pharmaceuticals and substitute for ethylene glycol); **Methanol** — 11th time in 12 months (used heavily as a solvent and in synthesizing other chemicals); **Zinc Oxide** — (used heavily as a pigment in painting, cosmetics, driers, and inks); **Phenol** — 5th time in 7 months (used heavily in making phenolic resins); **Phenolic Resins** — (used in making plastic products); **Styrene** — 8th consecutive month (used chiefly in making synthetic rubber, plastic resins and plastic); **Latex** — (used heavily in coatings, paint, adhesives, and carpets); **Polyvinyl Chloride (PVC)** — 6th consecutive month (used in wire and cable coating, vinyl siding, pipe, tubing, textile finishes, belting, and auto interiors); **Polypropylene** — 9th time in 11 months (used in making fabrics, carpets and yarns); **Gasoline**; **Semiconductors** — (used heavily in PCs, autos, appliances, and military hardware); **Corn Starch** — (used heavily in food processing and in making paper); **Orange Juice** — 2nd consecutive month.

Report On Business®

BUYING POLICY

Lead times for Production Materials lengthened slightly in December. The number of purchasers reporting lead times of 30 days or less rose to 57%, up from 53% in November.

Lead times for Capital Expenditures were somewhat less. The number of members reporting lead times in the significant 6 months or longer category was only 50%, down from 52% in the previous two months, and the lowest since June 1988 (49%).

Lead times for Maintenance, Repair and Operating (MRO) Supplies also declined. The number of purchasers reporting lead times of 30 days or less increased significantly to 90%, up from 85% in November and the most since May 1986 (also 90%).

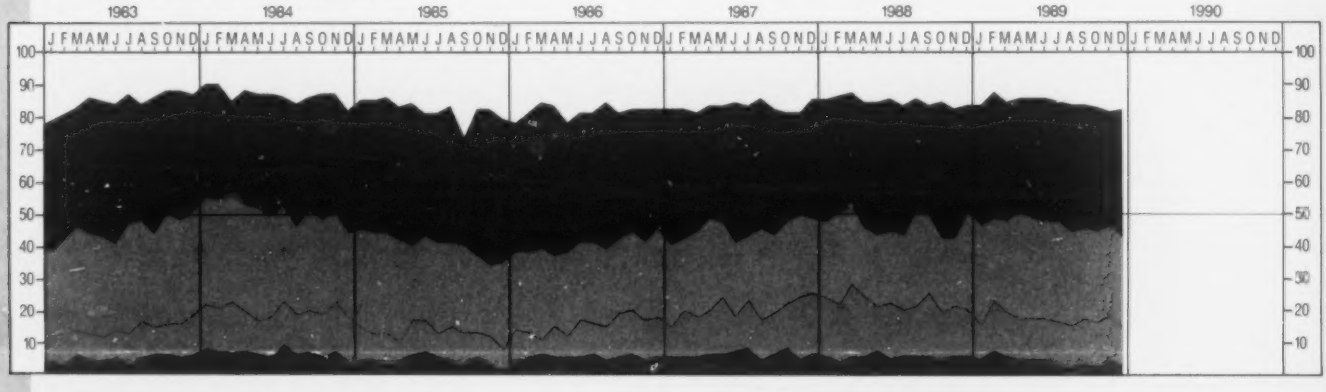
PERCENT REPORTING

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
December	17	40	27	13	3
November	18	35	28	14	5
October	17	38	28	14	3
September	16	38	28	14	4

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
December	11	6	15	18	50
November	11	7	13	17	52
October	12	7	14	15	52
September	10	7	13	18	54

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
December	42	48	7	3	0
November	42	43	12	2	1
October	42	47	10	1	0
September1989	44	42	11	2	1

PRODUCTION MATERIALS

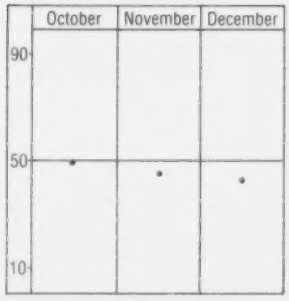


NEW EXPORT ORDERS

Of the 72% of members exporting, 15% reported better Export Orders, down from 16% last month. The 9% reporting worse Export Orders is up sharply from 5% in November. The seasonally unadjusted Export Orders index fell to 53.0%, down from the 55.5% in November and October 1989, and the lowest in jthe two-year history of this index.

	%Better	%Same	%Worse	Net	Diffusion Index	%Exporting
December	15	76	9	+ 6	53.0	72.0
November	16	79	5	+11	55.5	69.4
October	19	73	8	+11	55.5	73.0
September	27	67	6	+21	60.5	70.0

NEW IMPORTS



1989 (Index)

Of the 78.2% of members importing, 5% reported higher Imports in December, down from 8% in November, while 14% reported lower Imports, unchanged from last month. The result was the third consecutive drop in the seasonally unadjusted Import index to 45.5%, down from 47.0% in November and 49.0% in October (the first survey month).

	%Better	%Same	%Worse	Net	Diffusion Index	%Exporting
December	5	81	14	−9	45.5	78.2
November	8	78	14	−6	47.0	76.4
October	10	78	12	−2	49.0	73.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Production, Vendor Deliveries, Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Vendor Deliveries), and the negative economic direction (lower, worse and faster for Vendor Deliveries), and the diffusion index.

The charts provide a basis for comparing current data with historical patterns.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays.

All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Vendor Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

A6910-1

Report On Business®

Economic Decline Worsens in January; PMI Falls to 45.2%; Lowest Since Dec. 1982

JANUARY REPORT

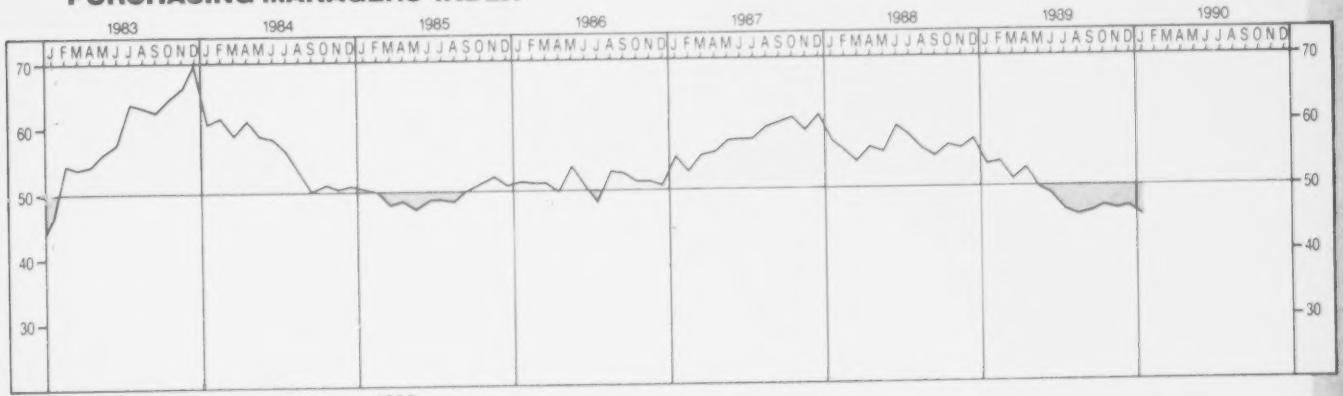
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The economy declined sharply in January for the ninth consecutive month, at the greatest rate of decline since December 1982, say the nation's purchasing executives in their latest **Report on Business**. All seasonally adjusted indexes from January 1988 to date were revised to accurately reflect the Department of Commerce annual adjustments to seasonalization factors. Please note adjustment in the following data. The Production index fell significantly in January and is at its lowest since December 1982. New Orders also registered a sharp decline from December. Employment declined for the 11th consecutive month and the Inventories index was the lowest since December 1986.

New Export Orders continued to show relative strength amidst the overall economic decline. Imports increased sharply from December. Prices declined for the eighth consecutive month but at the lowest rate since they began to decline in May 1989. Many of the items reported higher-priced and short in supply in January were the direct result of the record cold weather experienced in December and early January. Supplier Deliveries were faster for the ninth consecutive month although at the lowest rate since June 1989. (NOTE: The name Vendor Deliveries has been changed to *Supplier Deliveries* to more accurately reflect current usage within the purchasing profession.)

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy entered 1990 on a dismal note: the greatest rate of decline since the second month of this lengthy economic recovery. All indicators in January confirmed the anemic condition of the economy, with the exception of New Export Orders, which continues to register relatively strong growth."

PURCHASING MANAGERS' INDEX



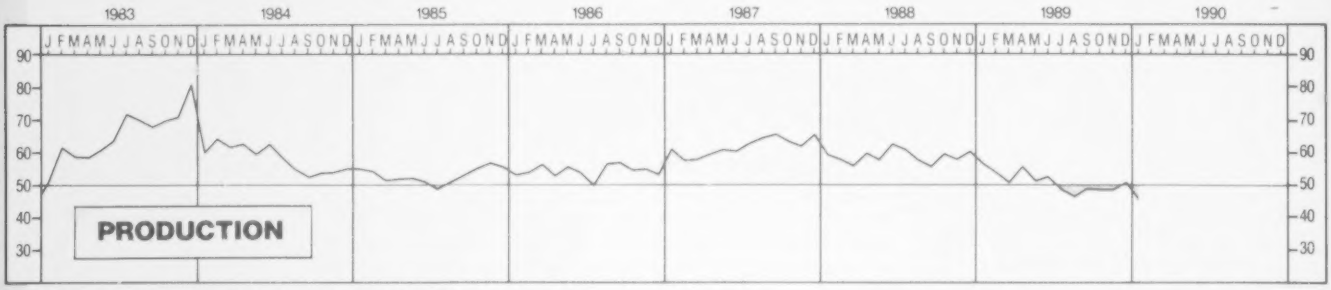
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

January '89	53.5	August '89	45.5
February '89	53.7	September '89	46.0
March '89	51.0	October '89	46.9
April '89	52.7	November '89	46.4
May '89	49.8	December '89	46.7
June '89	48.8	January '90	45.2
July '89	46.2		

The **Purchasing Managers' Index** (PMI) fell in January to 45.2%, down from 46.7% in December. Both numbers reflect an update by the U.S. Department of Commerce of the seasonal adjustment factors used to calculate the Purchasing Managers' Index as well as the diffusion indexes for all other indicators included in the January Report on Business. The New Export Orders index and the Imports index, which are not seasonally adjusted are an exception. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The PMI averaged a revised 48.9% for all of 1989. Based on past experience, this is consistent with real GNP growth of about 2.2% after adding the additional .6% to reflect the rebound in agricultural output in 1989 from the 1988 drought. Although the PMI would have to fall below 44% before indicating a decline in real GNP, the 45.2% PMI for January provides a weak foundation upon which to build the 1990 economy."

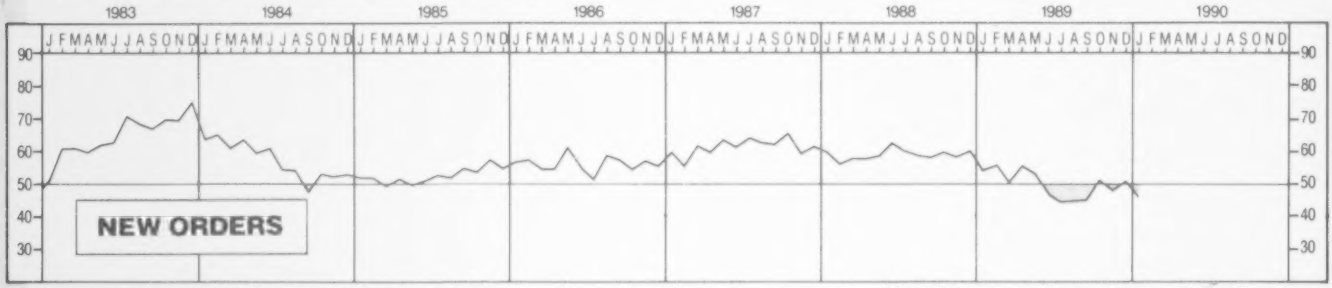
BUSINESS



Peak — July 1981; Trough — November 1982.

Production declined for the seventh consecutive month. The Production index dropped to 45.4%, significantly lower than the revised 48.4% in December and is the lowest since December 1982 (44.0%), when our current recovery began. However, a number of members indicated their production was curtailed in January as a consequence of record-setting cold weather conditions in December and early January.

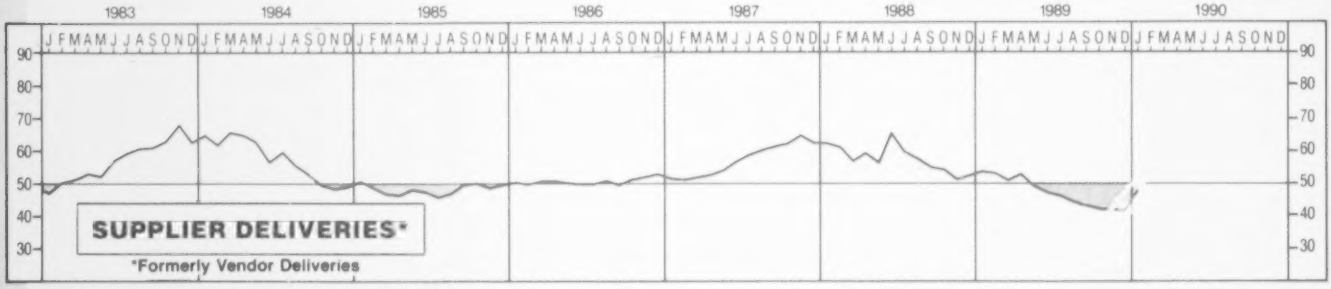
Production	%Better	%Same	%Worse	Net	Index
January	18	56	26	– 8	45.4
December	17	58	25	– 8	48.4
November	19	56	25	– 6	48.4
October	17	62	21	– 4	48.1



Peak — July 1981; Trough — November 1982.

New Orders declined in January for the eighth consecutive month. The New Orders index fell to 45.8%, down sharply from the revised 49.4% in December, and to the lowest since September 1989 (also 45.8%).

New Orders	%Better	%Same	%Worse	Net	Index
January	23	50	27	– 4	45.8
December	17	56	27	–10	49. 4
November	20	52	28	– 8	48.2
October	21	54	25	– 4	49.6



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in January, but at the lowest rate in seven months. The Supplier Deliveries index rose to 47.2%, up significantly from a revised 42.5% in December, and the most since June 1989 (47.6%). The higher index is a reflection of the difficulties encountered in production and transportation in January, caused primarily by extreme cold weather conditions in December and early January.

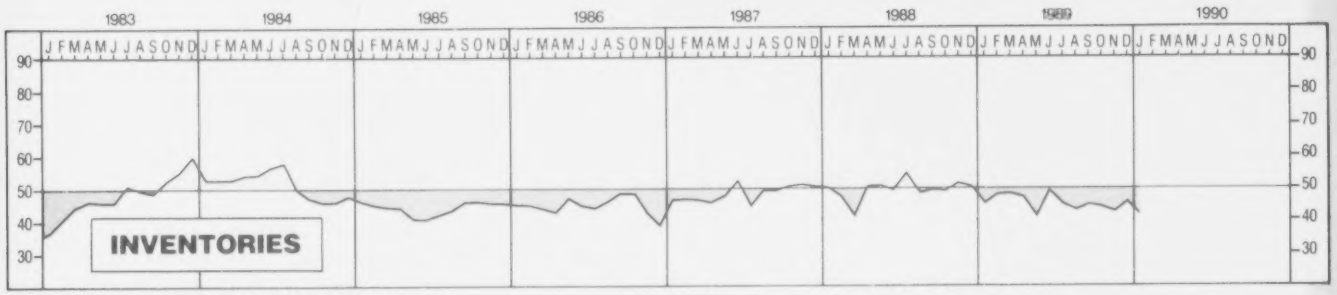
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
January	7	82	11	– 4	47.2
December	4	78	18	–14	42.5
November	5	75	20	–15	43.0
October	3	81	16	–13	42.9

IN SHORT SUPPLY

Bearings — 18th consecutive month; a consequence of anti-dumping suits; **Bleached Paperboard** — 19th consecutive month; **Caustic Soda/Soda Ash** — 32nd consecutive month (used heavily in paper-making, petroleum refining, and soap making); **Hydrogen Peroxide** — 2nd consecutive month (increasing demand exceeding supply because of switching from chlorine use by paper-makers to avoid dioxins; used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic); **Sodium Chlorate** — 8th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used heavily in paper-making and dyeing); **Titanium Dioxide** — 30th consecutive month; increasing demand exceeding supply because of switching from chlorine used by paper-makers to avoid dioxins (lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Natural Gas** — Primarily as a consequence of record-setting cold weather; **Propane** — Primarily as a consequence of curtailed production caused by freezing weather conditions at Gulf Coast plants.

UP IN PRICE

Rhodium — Used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of silverware from tarnishing; **Bearings** — 18th time in 19 months; **Acetone** — 2nd time in 4 months (a solvent for fats, oils, waxes, resins, rubber, plastics, lacquer, and varnishes); **Caustic Soda/Soda Ash** — 38th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper makers (used heavily in paper-making, petroleum refining and soap making); **Methanol** — Some reports of lower prices (used heavily as a solvent and in synthesizing other chemicals); **Sodium Chlorate** — Primarily as a consequence of increasing demand exceeding supply because of switching from chlorine used by paper makers to avoid dioxins; **Freon** — 3rd consecutive month (used as a refrigerant); **Nylon**; **Gasoline**; **Diesel Fuel**; **Fuel Oil** — 4th consecutive month;



Peak — July 1981; Trough — November 1982.

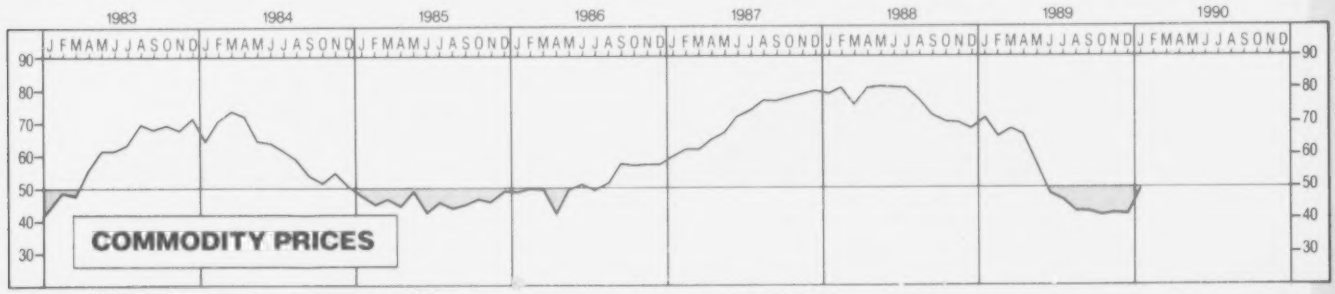
Inventories declined in January for the 13th consecutive month at the fastest pace in over four years. The Inventories index fell to 41.8%, sharply lower than the revised 44.5% in December, and the lowest since December 1986 (38.4%). Purchasers responded to sharply lower production by promptly reducing inventory.

Inventories	%Higher	%Same	%Lower	Net	Index
January	14	56	30	−16	41.8
December	15	55	30	−15	44.5
November	13	53	34	−21	42.8
October	13	60	27	−14	44.5

Peak — July 1981; Trough — November 1982.

Employment declined for the 11th consecutive month in January. The Employment index slipped to 44.1%, down from a revised 44.9% in December and the lowest since November 1986 (42.2%). A number of members reported workforce reduction programs in place through layoffs, hiring freezes, and attrition.

Employment	%Higher	%Same	%Lower	Net	Index
January	8	71	21	−13	44.1
December	8	69	23	−15	44.9
November	12	65	23	−11	45.4
October	10	70	20	−10	45.3



Peak — July 1981; Trough — November 1982.

Prices declined in January for the eighth consecutive month although at an appreciably lower rate. The Price index rose to 49.7%, up substantially from a revised 42.7% in December and the highest since May 1989 (57.5%). Purchasers noted that a number of the 16 items reported up in price were related to shortages caused by record-setting low temperatures in late December and early January.

Prices	%Higher	%Same	%Lower	Net	Index
January	24	56	20	− 4	49.7
December	10	63	27	−17	42.7
November	10	64	26	−16	43.1
October	10	64	26	−16	42.7

Natural Gas — 4th consecutive month; **Propane** — Primarily as a consequence of curtailed production caused by freezing weather conditions at Gulf Coast plants; **Milk/Milk power** — 3rd time in 4 months; a consequence of increased demand for dairy products, fewer dairy cows, exceptionally higher government exports of nonfat dry milk and very low import quotas of nonfat dry milk (used in food processing); **Orange Juice** — After being reported down in price in December 1989 for 2 consecutive months; **Sugar** — 3rd consecutive month.

DOWN IN PRICE

Aluminum — 10th consecutive month; **Aluminum Products** — 3rd consecutive month; **Copper** — 3rd consecutive month; **Magnesium** — Used heavily as a constituent of light alloys for manufacturing precision instruments; **Nickel** — 8th consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Steel** — 5th consecutive month; **Steel Scrap** — 3rd consecutive month; **Stainless Steel** — 2nd consecutive month; after being reported up in price for the 15th time in 20 months in July 1989; **Zinc** — 8th time in 9 months (used heavily in metal alloys and as a protective coating for metal); **Printing Paper** — 6th time in 7 months; **Alcohols** — After being reported up in price in April 1989 (used as a solvent in laboratories and in industries); **Chlorine** — 5th time in 10 months; primarily a consequence of lower demand by paper-makers switching to alternatives to avoid dioxins while demand for co-produced caustic soda continues (used heavily in bleaching paper and fabrics, purifying water and in making synthetic rubber, plastics and other chemicals); **Ethylene Derivatives** — 2nd consecutive month; **Methyl Ethyl Keytone (MEK)** — 5th time in 11 months (used heavily as a chemical solvent in surface coatings and in making resins); **Phenol** — 6th time in 8 months (used heavily in making phenolic resins); **Plastic Silicon** — 2nd time in 5 months (used heavily in making transistors, diodes, and semiconductors); **DRAMS** — 5th time in 9 months (dynamic electronic memory devices used heavily in computers).

Report On Business®

BUYING POLICY

Lead times for Capital Expenditures lengthened slightly in the important 6 months or longer category. The number of members reporting lead times of 6 months or longer was 51%, up slightly from 50% in December but still down from 52% in the two previous months.

Lead times for Production Materials were virtually unchanged in January. The number of purchasers reporting lead times of 30 days or less rose to 58%, up slightly from 57% in December and 53% in November.

Lead times for Maintenance, Repair, and Operating (MRO) Supplies lenghtened. The number of members reporting lead times of 30 days or less fell to 86%, down from 90% in December, which was the most since May 1986 (also 90%).

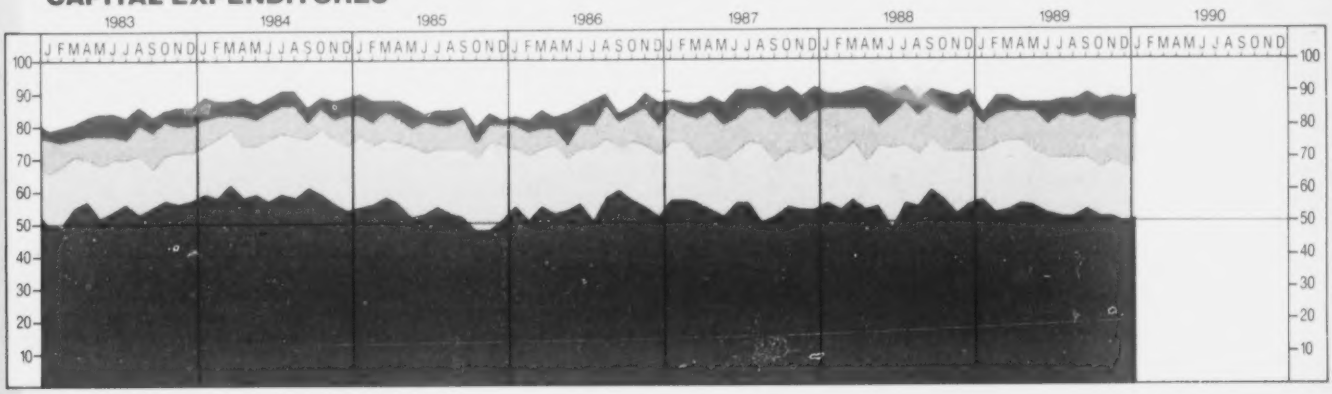
PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
January	11	8	13	17	51
December	11	6	15	18	50
November	11	7	13	17	52
October	12	7	14	15	52

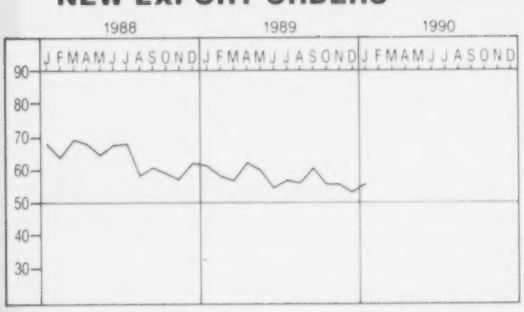
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
January	17	41	25	11	6
December	17	40	27	13	3
November	18	35	28	14	5
October	17	38	28	14	3

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
January	41	45	11	2	1
December	42	48	7	3	0
November	42	43	12	2	1
October	42	47	10	1	0

CAPITAL EXPENDITURES



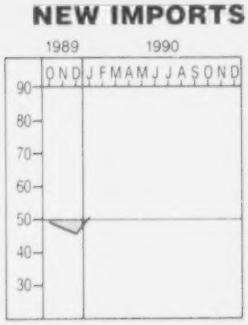
NEW EXPORT ORDERS



Of the 73% of members exporting, 17% reported better Export Orders, up from 15% last month. The 6% reporting worse Export Orders is down from 9% in December. The seasonally unadjusted New Export Orders index increased to 55.5%, up from the 53% in December, the same rate of growth as in October and November 1989.

	%Better	%Same	%Worse	Net	Diffusion Index	%Exporting
January	17	77	6	+11	55.5	73.0
December	15	76	9	+ 6	53.0	72.0
November	16	79	5	+11	55.5	69.4
October	19	73	8	+11	55.5	73.0

NEW IMPORTS



Of the 82% of members importing, 12% reported higher Imports, up sharply from 5% in December, while 11% reported lower Imports. It is a reversal of three consecutive months of lower indexes. The seasonally unadjusted Imports index increased to 50.5%, up from 45.5% in December and the highest in the four-month history of the index.

	%Better	%Same	%Worse	Net	Diffusion Index	%Exporting
January	12	77	11	+1	50.5	82.0
December	5	81	14	−9	45.5	78.2
November	8	78	14	−6	47.0	76.4
October	10	78	12	−2	49.0	73.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

The charts provide a basis for comparing current data with historical patterns.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays.

All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

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Report On Business®

Economic Decline Eases in February; PMI Rises to 48.3%

FEBRUARY REPORT

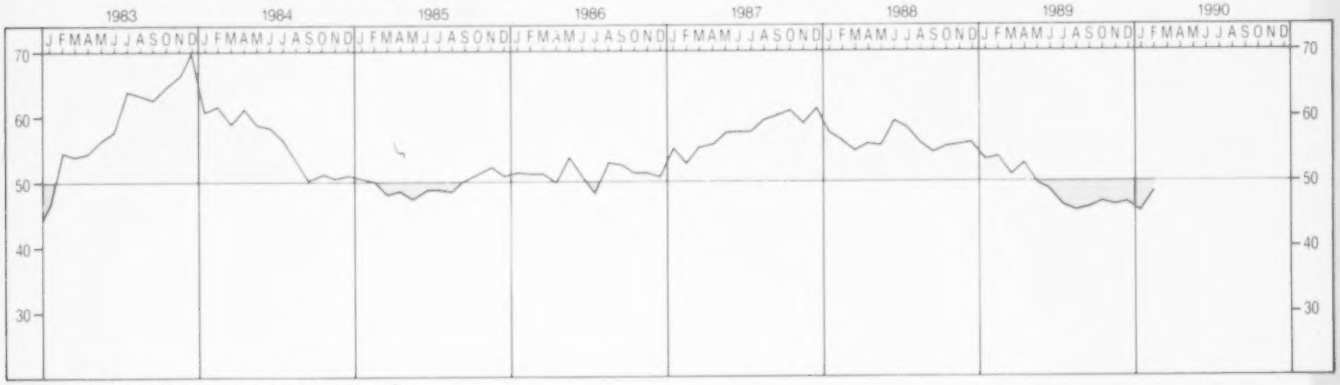
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The economy declined in February for the 10th consecutive month, but at the lowest rate of decline since June 1989, say the nation's purchasing executives in their latest **Report on Business.** New Orders increased for the first time since May 1989. Production also registered an increase for the first time since June 1989. Both New Export Orders and Imports continued to show increases. Employment declined for the 12th consecutive month, although the rate of decline was the lowest since June 1989.

Supplier Deliveries (formerly Vendor Deliveries) were faster for the 10th consecutive month at a significantly greater rate than in January 1990, when many shortages developed as a consequence of the record cold weather experienced in December. The improvement in Supplier Deliveries was reflected in Inventories, which declined for the 15th consecutive month at the greatest rate of decline since December 1986. Prices declined for the ninth consecutive month at the greatest rate since December 1982 and a significant decline from January 1990, when the shortages and slower deliveries resulting from the severe weather conditions in December caused many prices to rise.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy declined in February, however, the rate of the decline was the lowest in eight months. Although the first increases registered in Production and New Orders since mid-1989 are encouraging, the continued improvement in Supplier Deliveries and significant decline in Prices suggests a lack of any underlying strength in the economy."

PURCHASING MANAGERS' INDEX



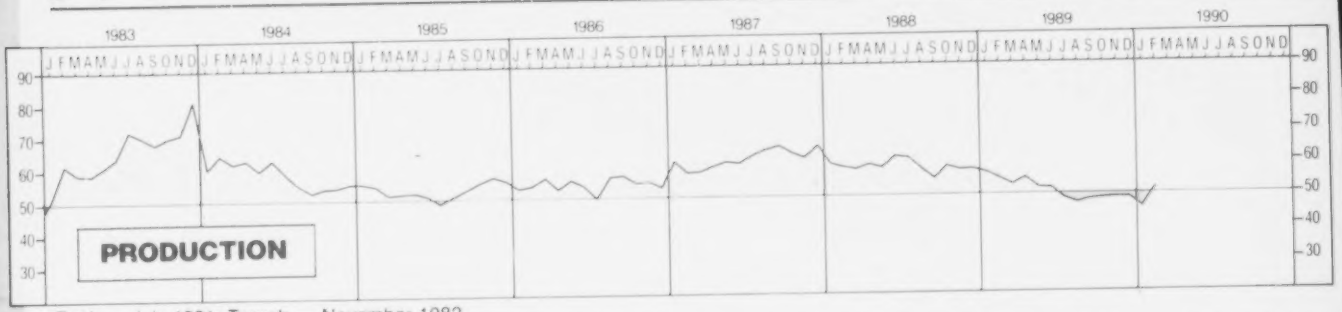
Peak — July 1981; Trough — November 1982

PURCHASING MANAGERS' INDEX (PMI)

February '89	53.7	September '89	46.0
March '89	51.0	October '89	46.9
April '89	52.7	November '89	46.4
May '89	49.8	December '89	46.7
June '89	48.8	January '90	45.2
July '89	46.2	February '90	48.3
August '89	45.5		

The **Purchasing Managers' Index** (PMI) rose to 48.3% in February, up from 45.2% in January. Although February is the 10th consecutive month of decline, the 48.3% reading is the highest since June 1989 (48.8%). A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "Although the increase of over three points in the PMI from the low January level looks impressive, it appears that much of the improvement is attributed to the additional production required to make up for weather-related production curtailment in December and early January, and the severe auto industry cutbacks in January."

BUSINESS



Peak — July 1981; Trough — November 1982.

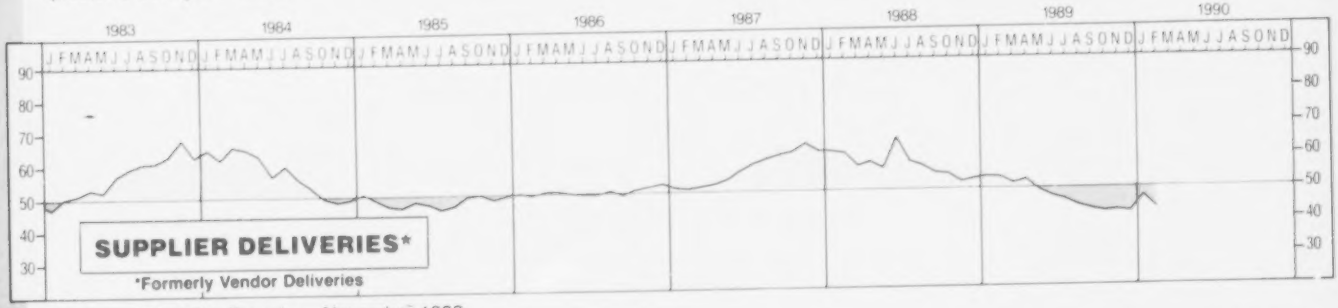
Production increased in February for the first time since mid-1989. The Production Index rose to 51.5%, up sharply from 45.4% in January and the highest since June 1989 (51.5%). The significant improvement from January appears to be a correction from much lower production activity in January, particularly in the auto industry and industries affected by severe cold weather conditions during the coldest December in recorded U.S. history.

Production	%Better	%Same	%Worse	Net	Index
February	27	53	20	+ 7	51.5
January	18	56	26	- 8	45.4
December	17	58	25	- 8	48.4
November	19	56	25	- 6	48.4

Peak — July 1981; Trough — November 1982.

New Orders increased in February for the first time since they declined in June 1989. The New Orders Index rose to 51.8%, up from 45.8% in January. The sharp increase appears to reflect a rebound from the severe reductions in auto production in January and weather-related problems during December.

New Orders	%Better	%Same	%Worse	Net	Index
February	29	48	23	+ 6	51.8
January	23	50	27	- 4	45.8
December	17	56	27	- 10	49.4
November	20	52	28	- 8	48.2



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in February for the 10th consecutive month. The Supplier Deliveries Index fell to 43.3% in February, down significantly from January (47.2%). The improvement from last month reflects the increased production in February and fewer shortages than in January which resulted from the extreme cold weather in December.

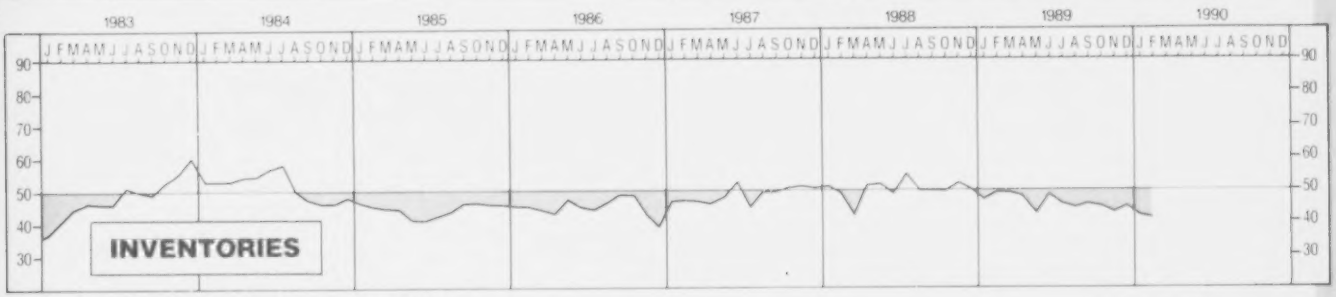
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
February	3	80	17	- 14	43.3
January	7	82	11	- 4	47.2
December	4	78	18	- 14	42.5
November	5	75	20	- 15	43.0

IN SHORT SUPPLY

Bearings — 19th consecutive month, a consequence of anti-dumping suits. **Castings** — 14th time in 18 months. **Electric Motors** — 6th time in 11 months. **Acrylic Acid** — 17th time in 20 months (used in manufacturing plastics). **Caustic Soda/Soda Ash** — 33rd consecutive month (used heavily in paper-making, petroleum refining and soap-making). **Hydrogen Peroxide** — 3rd consecutive month (increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins, used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic). **Sodium Chlorate** — 9th consecutive month (increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins, used heavily in paper-making and dyeing). **Titanium Dioxide** — 31st consecutive month (increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins, a lead-free pigment used as a whitener in coatings, paints, paper and other industrial applications). **Polyethylene Resins** — Primarily as a consequence of an explosion at Phillips Petroleum plant reducing about 8% of U.S. polyethylene resin output until mid-1990 (used heavily in making packaging materials and paper coatings).

UP IN PRICE

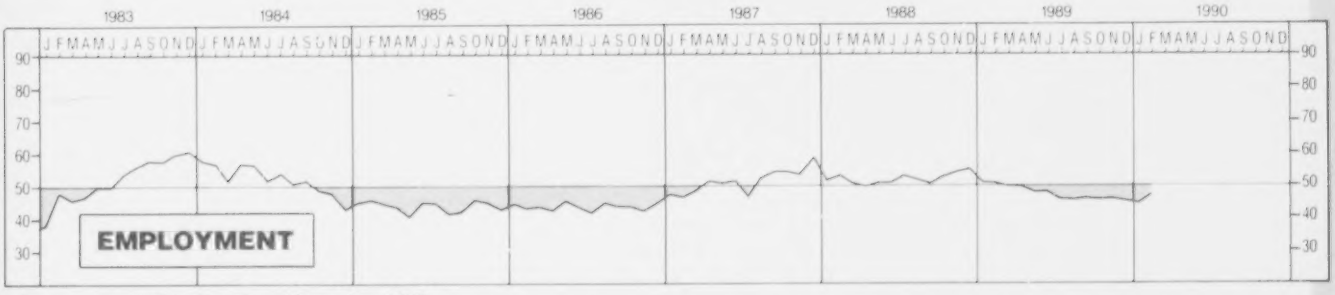
Rhodium — 2nd consecutive month (used heavily as an alloy with platinum and as a corrosion-resistant electroplate for protection of silverware from tarnishing). **Caustic Soda/Soda Ash** — 39th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper-makers (used heavily in paper-making, petroleum refining and soap making). **Methanol** — 2nd consecutive month (used heavily as a solvent and in synthesizing other chemicals). **Toluene** — Used heavily in making explosives, dyes, and benzoic acid; as a solvent in paint, and as a gasoline additive. **Freon** — 4th consecutive month (used as a refrigerant). **Polystyrene** — Used chiefly in making synthetic rubber, plastic resins and plastic. **Coal**. **Corn**



Peak — July 1981; Trough — November 1982.

Inventories declined in February for the 15th consecutive month. The Inventories Index fell to 40.8%, down from 41.8% in January, and the lowest since December 1986 (38.4%).

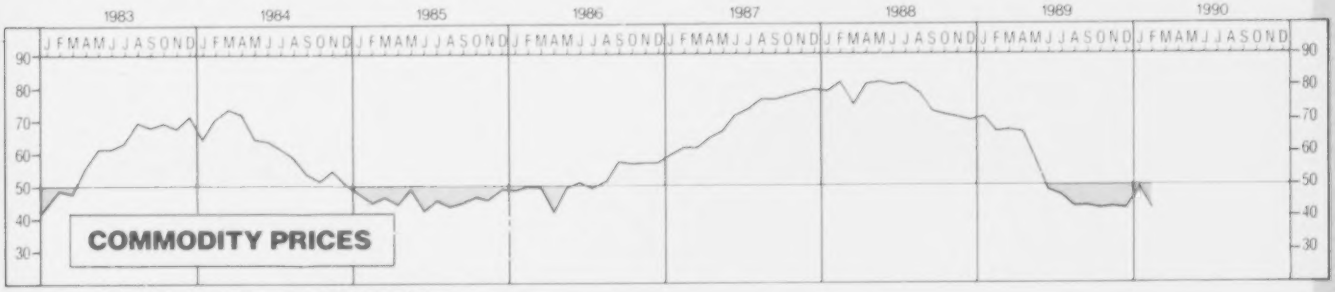
Inventories	%Higher	%Same	%Lower	Net	Index
February	18	50	32	-14	40.8
January	14	56	30	-16	41.8
December	15	55	30	-15	44.5
November	13	53	34	-21	42.8



Peak — July 1981; Trough — November 1982.

Employment declined for the 12th consecutive month in February, but at the lowest rate since mid-1989. The Employment Index rose to 46.7% in February, up from 44.1% in January, and the highest since June 1989 (47.7%). A number of members continued to report layoffs, hiring freezes and early retirement programs.

Employment	%Higher	%Same	%Lower	Net	Index
February	11	69	20	-9	46.7
January	8	71	21	-13	44.1
December	8	69	23	-15	44.9
November	12	65	23	-11	45.4



Peak — July 1981; Trough — November 1982.

Prices declined in February for the ninth consecutive month. The Price Index fell to 42.2%, down sharply from 49.7% in January and the lowest since December 1982 (39.1%), which was the beginning of our current economic recovery. All of the items, which were reported higher priced in January because of weather-related shortages, are on the February list of items reported down in price.

Prices	%Higher	%Same	%Lower	Net	Index
February	13	59	28	-15	42.2
January	24	56	20	+ 4	49.7
December	10	63	27	-17	42.7
November	10	64	26	-16	43.1

Products — Corn starch (used heavily in both food processing and paper making) and corn sweeteners (used in food processing).

DOWN IN PRICE

Aluminum — 11th consecutive month; **Aluminum Products** — 4th consecutive month; **Brass**; **Copper** — 4th consecutive month; **Nickel** — 9th consecutive month (used heavily in making stainless steel, plating metals and batteries); **Steel** — 6th consecutive month; **Steel Scrap** — 4th consecutive month; **Stainless Steel** — 3rd consecutive month, after being reported up in price for the 15th time in 20 months in July 1989; **Zinc** — 9th time in 10 months (used heavily in metal alloys and as a protective coating for metal); **Corrugated Shipping Containers**; **Printing Paper** — 7th time in 8 months; **Acetic Acid** — Used in making various acetates, plastics and rubber in tanning, a preservative in foods and a solvent for gums, resins, volatile oils, etc.; **Benzine** — After being reported up in price for 3rd consecutive month in December 1989 (used heavily in making medicinal chemicals, dyes, varnishes, lacquers and resins); **Chlorine** — 6th time in 11 months, primarily a consequence of lower demand by paper-makers switching to alternatives to avoid dioxins while demand for co-produced caustic soda continues (used heavily in bleaching paper and fabrics; purifying water; and, in making synthetic rubber, plastics and other chemicals); **Ethylene Glycol** — Used heavily in making antifreeze, brake fluid, plastic paint and ink; **Ethylene Derivatives** — 3rd consecutive month; **Plastic Resins** — 2nd consecutive month (used in making plastic products); **Rubber**; **Gasoline** — After being reported up in price in January 1990; **Diesel Fuel** — After being reported up in price in January 1990; **Fuel Oil** — After being reported up in price in January 1990 for 4 consecutive months; **Natural Gas** — After being reported up in price in January 1990 for 4 consecutive months; **Propane** — After being reported up in price in January 1990; **Eggs**.

Report On Business®

BUYING POLICY

Lead times for Production Materials shortened slightly in February. The number of purchasers reporting lead times of 60 days or less rose to 85%, up from 83% in January.

Lead times for Capital Expenditures in the important six months or longer category was unchanged (51%) in February. However, the number of members reporting lead times of 60 days or less rose to 34% from 32% in January.

Lead times for Maintenance, Repair, and Operating (MRO) Supplies shortened in February. The number of members reporting lead times of 30 days or less rose to 89% up from 86% in January.

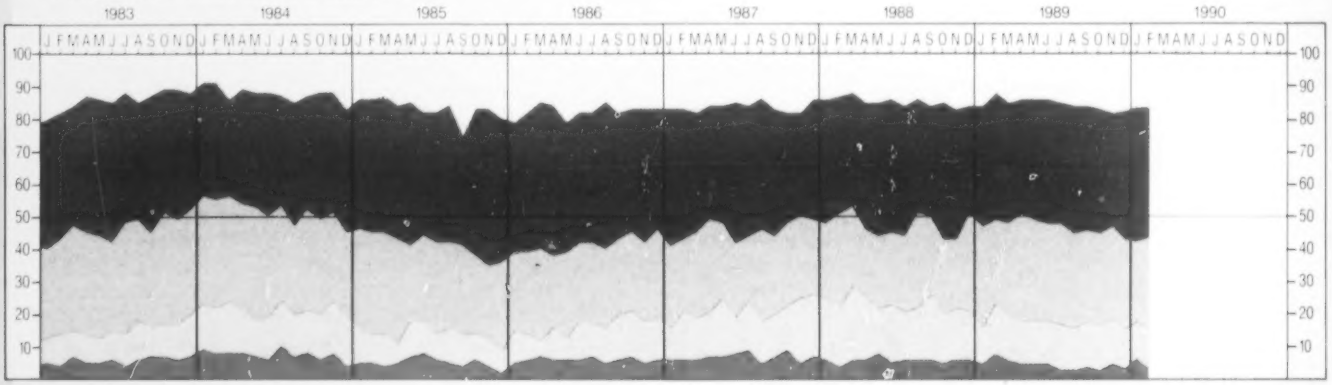
PERCENT REPORTING

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
February	17	40	28	12	3
January	17	41	25	11	6
December	17	40	27	13	3
November	18	35	28	14	5

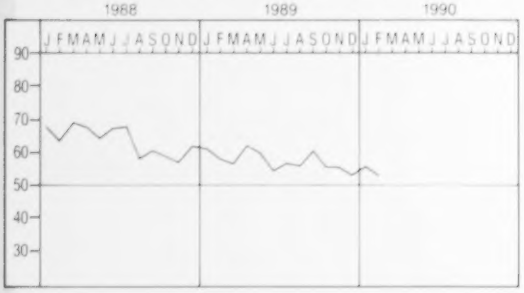
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
February	10	8	16	15	51
January	11	8	13	17	51
December	11	6	15	18	50
November	11	7	13	17	52

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
February	42	47	8	1	2
January	41	45	11	2	1
December	42	48	7	3	0
November	42	43	12	2	1

PRODUCTION MATERIALS

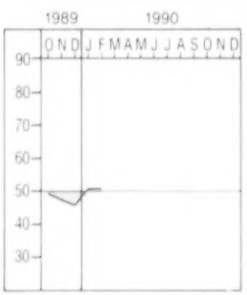


NEW EXPORT ORDERS



New Export Orders continued to show relatively strong growth in February. The number of members exporting (71%) is slightly higher than the overall average of 1989 (70%). The New Export Order Index fell to 53.0% in February, down slightly from 55.5% in January. The overall average of the index for all of 1989 was 57.5%.

NEW IMPORTS



Imports increased in February for the second consecutive month. The Imports Index (not seasonally adjusted) in February (50.5%) was unchanged from January and remains the highest in the five-month history of the index. The 77% of members importing in February was down somewhat from 82% in January, but within the average for the past four months.

	%Better	%Same	%Worse	Net	Diffusion Index	%Exporting
February	14	78	8	+ 6	53.0	71
January	17	77	6	+ 11	55.5	73
December	15	76	9	+ 6	53.0	72
November	16	79	5	+ 11	55.5	69

	%Better	%Same	%Worse	Net	Diffusion Index	%Exporting
February	12	77	11	+ 1	50.5	77
January	12	77	11	+ 1	50.5	82
December	5	81	14	− 9	45.5	78
November	8	78	14	− 6	47.0	76

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked to purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

AG910-1

Report On Business®

Economic Decline Lessens; PMI Advances to 48.8%, Production Index Rises to Highest Since April 1989

MARCH REPORT

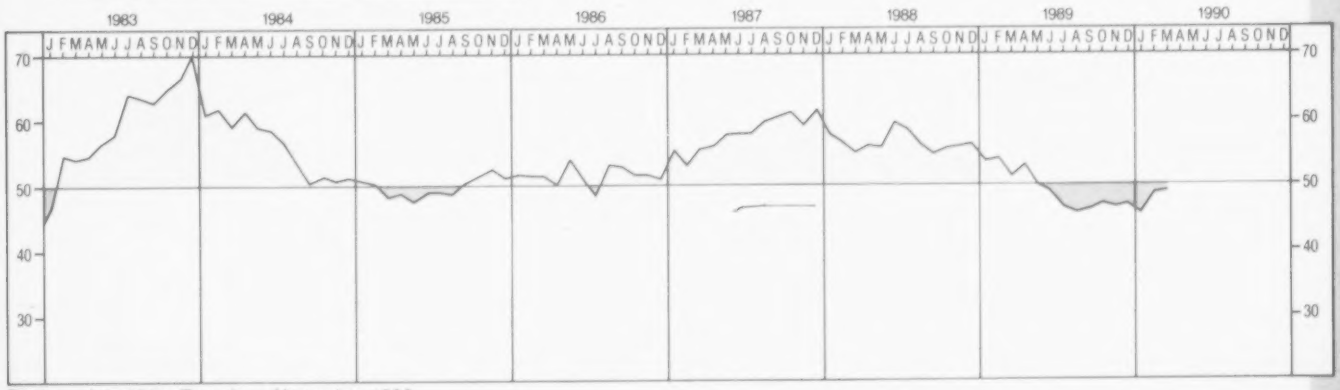
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The economic decline diminished somewhat in March, say the nation's purchasing executives in their latest **Report on Business.** The Production Index increased to 54.4%, the most since April 1989 and the second consecutive month that Production has increased. New Orders increased slightly for the second consecutive month but at a lesser rate than in February. The New Export Orders Index increased significantly to the highest level since September 1989. Imports also increased, but at the same low level as in the previous two months. Inventories decreased for the 16th consecutive month, although at a slightly lesser rate than the past two months.

Supplier Deliveries (formerly Vendor Deliveries) were faster for the 11th consecutive month, although the Supplier Deliveries Index was up two and one-half points from February. Only six commodities qualified for the In Short Supply list, the fewest since this economic recovery began. Prices declined for the 10th consecutive month, but at a considerably lower rate than in February. Employment also declined in March, for the 13th consecutive month

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "Although the manufacturing economy registered the 11th consecutive monthly decline in March, the rate of the decline was the lowest since June 1989. March was the only normal month in the first quarter, after the auto- and weather-related production curtailment in January and the make up for those reductions during February. The continued easing in the pace of the economic decline as we exit the first quarter is encouraging. Although we may be forming a bottom, caution should be exercised, since the first robin never makes it a spring."

PURCHASING MANAGERS' INDEX



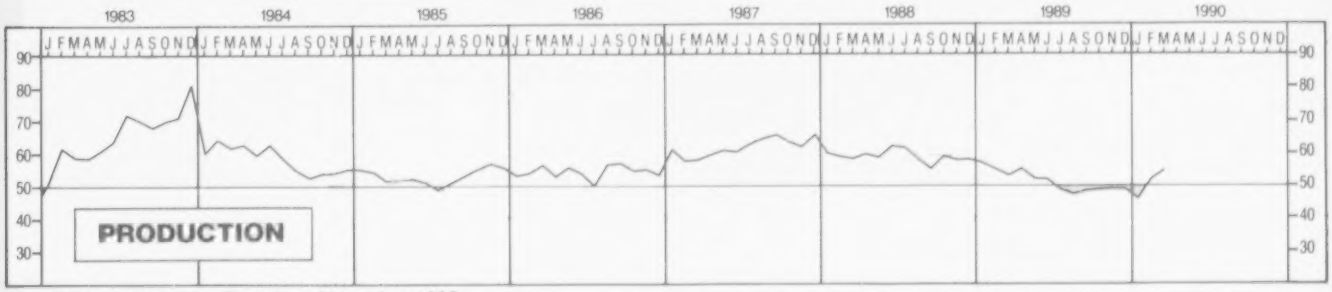
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

March '89	51.0	October '89	46.9
April '89	52.7	November '89	46.4
May '89	49.8	December '89	46.7
June '89	48.8	January '90	45.2
July '89	46.2	February '90	48.3
August '89	45.5	March '90	48.8
September '89	46.0		

The **Purchasing Managers' Index** (PMI) rose to 48.8% in March, inching upward from 48.3% in February. Although March is the 11th consecutive month this leading indicator has declined, the 48.8% reading is the highest the index has registered since June 1989 (also 48.8%). A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The rise in the PMI in March is a continuation of the gradual increase every month since November 1989, with the exception of January 1990, and may be signaling a leveling-off in the 11-month decline in the economy."

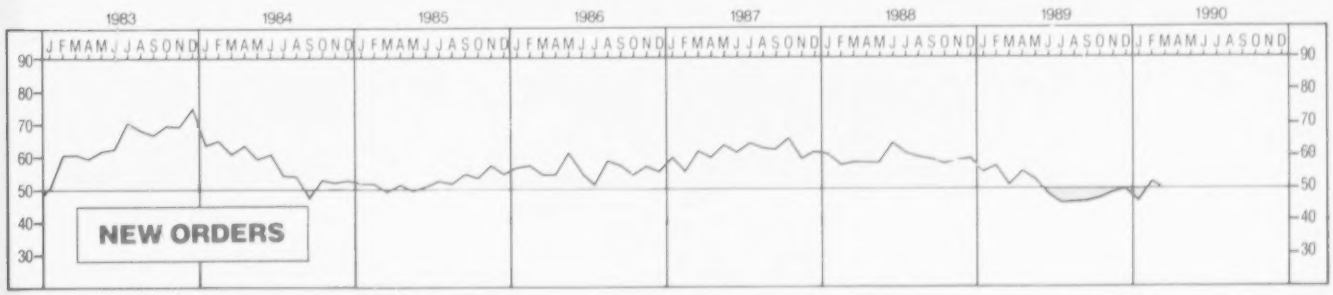
BUSINESS



Peak — July 1981; Trough — November 1982.

Production increased in March for the second consecutive month. The Production Index rose to 54.5%, up almost three points from February, and the most since April 1989 (54.9%).

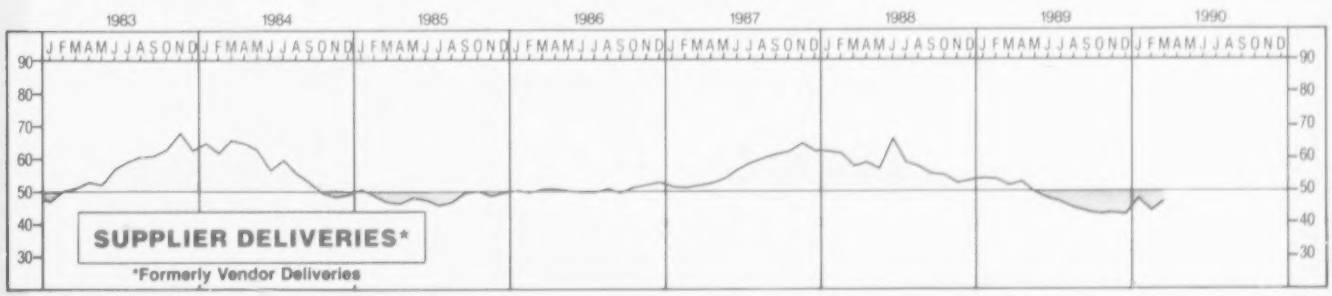
Production	%Better	%Same	%Worse	Net	Index
March 1990	28	55	17	+ 11	54.4
February 1990	27	53	20	+ 7	51.5
January 1990	18	56	26	- 8	45.4
December 1989	17	58	25	- 8	48.4



Peak — July 1981; Trough — November 1982.

New Orders increased slightly in March for the second consecutive month after increasing in February for the first time since mid-1989. The New Orders Index fell to 50.4%, down from 51.8% last month. The surge in New Export Orders contributed greatly to the continued increase in New Orders.

New Orders	%Better	%Same	%Worse	Net	Index
March 19[illegible]	30	48	22	+ 8	50.4
February [illegible]0	29	48	23	+ 6	51.8
January 1990	23	50	27	- 4	45.8
December 1989	17	56	27	- 10	49.4



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in March for the 11th consecutive month. The Supplier Deliveries Index rose two and one-half points to 45.8%, up from 43.3% in February. With a few exceptions, most commodities are not in short supply, nor are most purchasers having difficulty with their supplier deliveries.

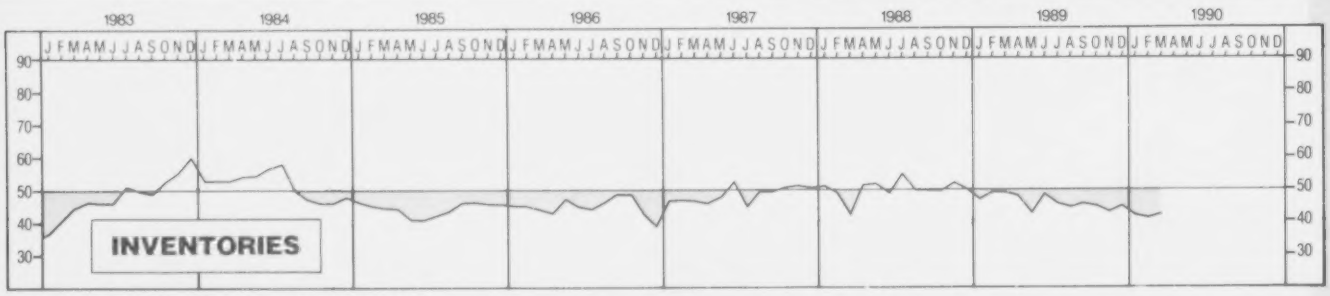
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
March 1990	5	84	11	- 6	45.8
February 1990	3	80	17	- 14	43.3
January 1990	7	82	11	- 4	47.2
December 1989	4	78	18	- 14	42.5

IN SHORT SUPPLY

Bearings — 20th consecutive month, a consequence of anti-dumping suits; **Electric Motors** — 7th time in 12 months; **Caustic Soda/Soda Ash** — 34th consecutive month (used heavily in paper-making, petroleum refining and soap-making); **Hydrogen Peroxide** — 4th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic); **Sodium Chlorate** — 10th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used heavily in paper-making and dyeing); **Titanium Dioxide** — 32nd consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (a lead-free pigment used as a whitener in coatings, paints, paper and other industrial applications).

UP IN PRICE

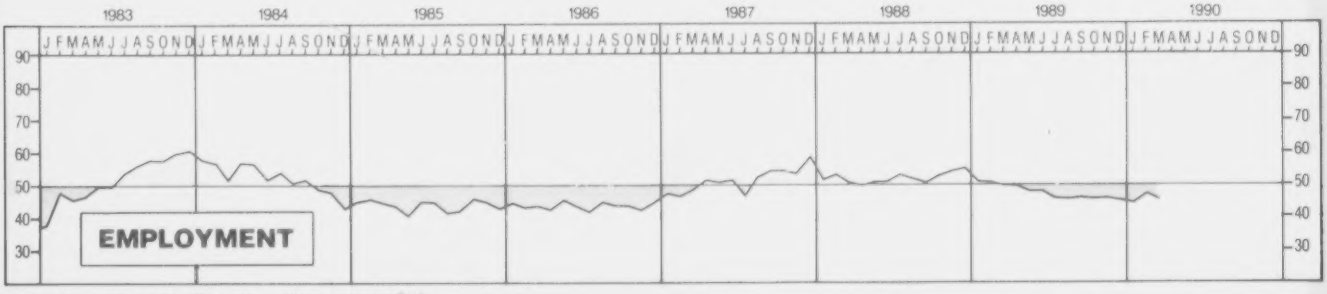
Nickel — After being reported down in price in February for the 9th consecutive month, (used heavily in making stainless steel, plating metals, and batteries); **Zinc** — After being reported down in price in February for the 9th time in 10 months, some reports of price decreases (used heavily in metal alloys and as a protective coating for metal); **Bearings** — 19th time in 21 months, a consequence of anti-dumping suits; **Electric Motors** — 6th time in 9 months; **Caustic Soda/Soda Ash** — 40th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper-makers (used heavily in paper-making, petroleum refining and soap making); **Methanol** — 3rd consecutive month, aided by a Brazilian court ruling allowing substitution of 33% methanol into Brazil's most widely used motor fuel (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Toluene** — 2nd consecutive month (used heavily in making explosives, dyes, and benzoic acid; as a solvent in paint and as a gasoline additive; **Xylene** — Used heavily in making benzoic acid, phthalic anhydride, polyester fibers and dyes; **Hardwoods** — Used heavily in making furniture, cabinets



Peak — July 1981; Trough — November 1982.

Inventories declined in March for the 16th consecutive month, although at a somewhat lesser rate than the previous two months. The Inventories Index rose to 41.6%, up from 40.8% in February, which was the lowest since December 1986 (38.4%).

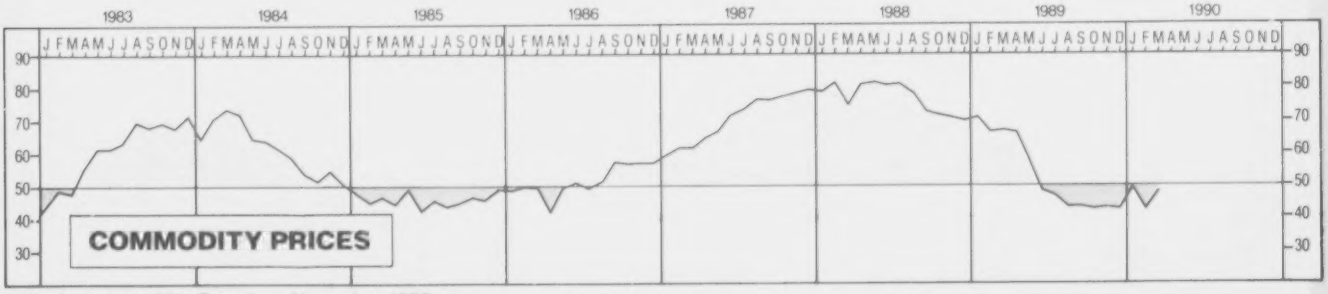
Inventories	%Higher	%Same	%Lower	Net	Index
March 1990	15	56	29	−14	41.6
February 1990	18	50	32	−14	40.8
January 1990	14	56	30	−16	41.8
December 1989	15	55	30	−15	44.5



Peak — July 1981; Trough — November 1982.

Employment declined for the 13th consecutive month in March. The Employment Index dropped to 45.2%, down from 46.7% in February. Members continued to report layoffs, hiring freezes, and early retirement programs to reduce employment.

Employment	%Higher	%Same	%Lower	Net	Index
March 1990	12	70	18	− 6	45.2
February 1990	11	69	20	− 9	46.7
January 1990	8	71	21	−13	44.1
December 1989	8	69	23	−15	44.9



Peak — July 1981; Trough — November 1982.

Prices declined in March for the 10th consecutive month, although the pace of the decline was lower than last month. The Price Index rose to 48.2%, up significantly from February (42.2%), which was the lowest since December 1982 (39.1%).

Prices	%Higher	%Same	%Lower	Net	Index
March 1990	13	72	15	− 2	48.2
February 1990	13	59	28	−15	42.2
January 1990	24	56	20	+ 4	49.7
December 1989	10	63	27	−17	42.7

and some grades of paper; **Gasoline** — 2nd time in 3 months; **Corn Products** — 2nd consecutive month; corn starch (used heavily in both food processing and paper making) and corn sweeteners (used in food processing).

DOWN IN PRICE

Aluminum — 12th consecutive month (particularly aluminum ingot); **Aluminum Products** — 5th consecutive month; **Steel** — 7th consecutive month (some reports of price increases); **Stainless Steel** — 4th consecutive month; **Linerboard** — Used heavily in making corrugated shipping cartons; **Corrugated Shipping Containers** — 2nd consecutive month; **Printing Paper** — 8th time in 9 months; **Acetic Acid** — 2nd consecutive month (used in making various acetates, plastics and rubber in tanning, a preservative in foods and a solvent for gums, resins and volatile oils); **Benzine** — 2nd consecutive month, after being reported up in price for 3rd consecutive month in December 1989 (used heavily in making medicinal chemicals, dyes, varnishes, lacquers and resins); **Chlorine** — 7th time in 12 months, primarily a consequence of lower demand by paper-makers switching to alternatives to avoid dioxins while demand for co-produced caustic soda continues (used heavily in bleaching paper and fabrics; purifying water; and, in making synthetic rubber, plastics and other chemicals); **Ethylene Glycol** — 2nd consecutive month (used heavily in making antifreeze, brake fluid, plastic paint and ink); **Phenol** — 7th time in 10 months (used heavily in making phenolic resins); **Plastic Resins** — 3rd consecutive month (used in making plastic products); **Propylene** — Used heavily in making polypropylene; **Fiberglass** — 2nd time in 5 months (used heavily in making glass, wool, yarns, textiles, structures and insulation); **Diesel Fuel** — 2nd consecutive month, after being reported up in price in January 1990; **Fuel Oil** — 2nd consecutive month, after being reported up in price in January 1990 for 4 consecutive months; **Natural Gas** — 2nd consecutive month, after being reported up in price in January 1990 for 4 consecutive months; **Milk/Milk Powder** — After being reported up in price in January 1990 for the 3rd time in 4 months.

Report On Business®

BUYING POLICY

Lead times for Production Materials were somewhat mixed. The number of purchasers reporting buying hand-to-mouth increased to 19%, reflecting shorter lead times. Also the number reporting lead times of 6 months or longer increased to 5%, up from 3% last month, reflecting longer lead time. Overall, lead times for Production Materials were slightly longer.

Lead times for Capital Expenditures also lengthened as 70% of members reported lead times of 90 days or longer, up from 66% in February.

Lead times for Maintenance, Repair and Operating (MRO) Supplies were virtually unchanged as 49% of members reported lead times of 30 days, up from 47% in February. This was offset by the 39% buying hand-to-mouth, down from 42% last month.

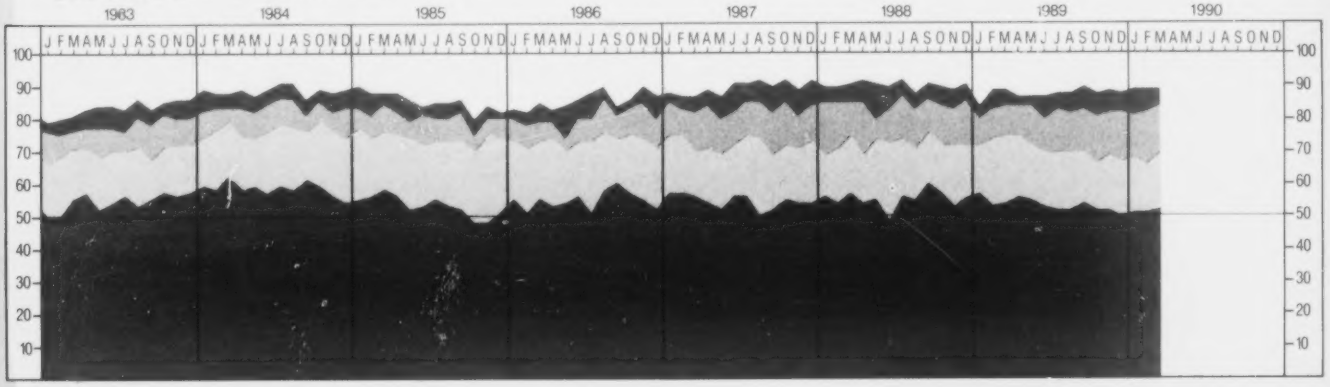
PERCENT REPORTING

Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
March 1990	11	5	14	18	52
February 1990	10	8	16	15	51
January 1990	11	8	13	17	51
December 1989	11	6	15	18	50

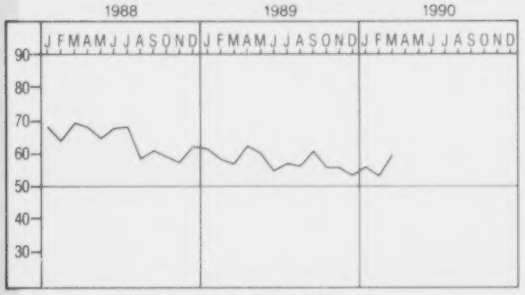
Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
March 1990	19	37	29	10	5
February 1990	17	40	28	12	3
January 1990	17	41	25	11	6
December 1989	17	40	27	13	3

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer
March 1990	39	49	9	2	1
February 1990	42	47	8	1	2
January 1990	41	45	11	2	1
December 1989	42	48	7	3	0

CAPITAL EXPENDITURES

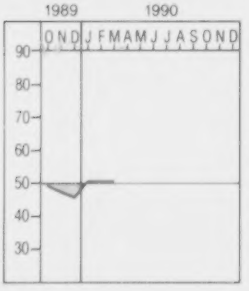


NEW EXPORT ORDERS



New Export Orders rose significantly in March. The seasonally unadjusted New Export Orders Index jumped to 59.5%, up over six points from February (53.0%), and the most since September 1989 (60.5%). The number of members exporting in March remained at 71%.

NEW IMPORTS



Imports increased in March for the third consecutive month. The Imports Index (not seasonally adjusted) was unchanged from February and January and remains the highest in the six-month history of the index. The number of members importing in March inched up to 78%, compared to February (77%).

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
March 1990	71	25	69	6	+19	59.5
February 1990	71	14	78	8	+ 6	53.0
January 1990	73	17	77	6	+11	55.5
December 1989	72	15	76	9	+ 6	53.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
March 1990	78	12	77	11	+1	50.5
February 1990	77	12	77	11	+1	50.5
January 1990	82	12	77	11	+1	50.5
December 1989	78	5	81	14	−9	45.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

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Report On Business®

Economy Increases In April; PMI Highest in a Year, 50.2%

APRIL REPORT

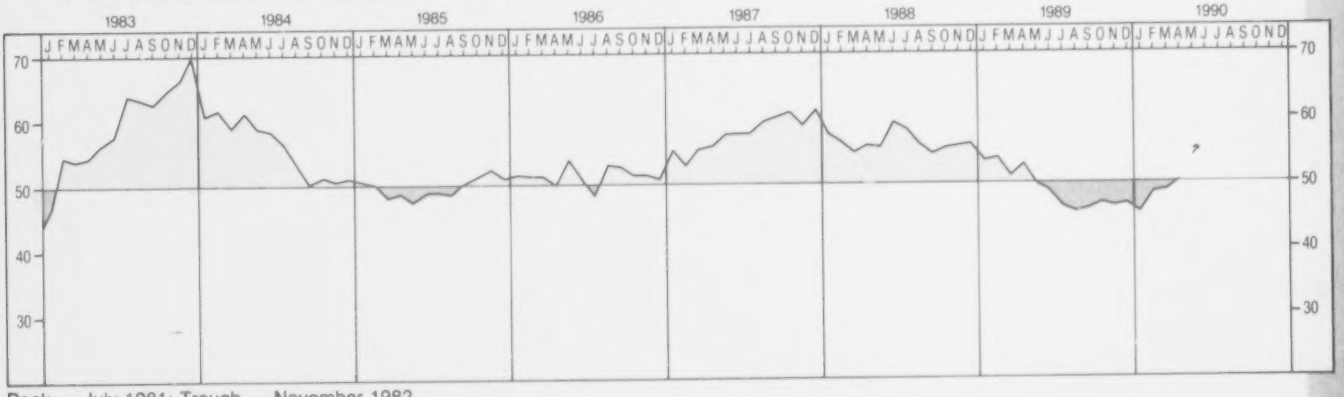
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The manufacturing economy increased slightly in April after declining for 11 consecutive months, say the nation's purchasing executives in their latest **Report on Business.** The Production Index increased for the third consecutive month although at a somewhat lower rate than in March. New Orders also increased for the third consecutive month and at the highest rate since February 1989. The New Export Orders Index also increased matching its previous highest level in September 1989. The Imports Index registered 50.5%, the same as in the past three months. The expansion in the economy did not come as a result of inventory building since inventories decreased for the 17th consecutive month, at an identical rate as last month.

Employment declined for the 14th consecutive month at virtually the same rate as in March. Supplier Deliveries were faster in April for the 12th consecutive month, but at the slowest rate since June 1989. Twelve commodities qualified for the In Short Supply list, twice the number of items reported in March. To further confirm the increase in the economy, more purchasing executives reported their prices were higher than lower for the first time since May 1989.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy inched into expansion territory as it entered the second quarter. Clearly, the improvement came as the result of a significant increase in New Orders, particularly the continued strong performance in New Export Orders. The rebound should be sufficient to sustain solid production growth for several months and buoy the entire economy over the balance of the second quarter."

PURCHASING MANAGERS' INDEX



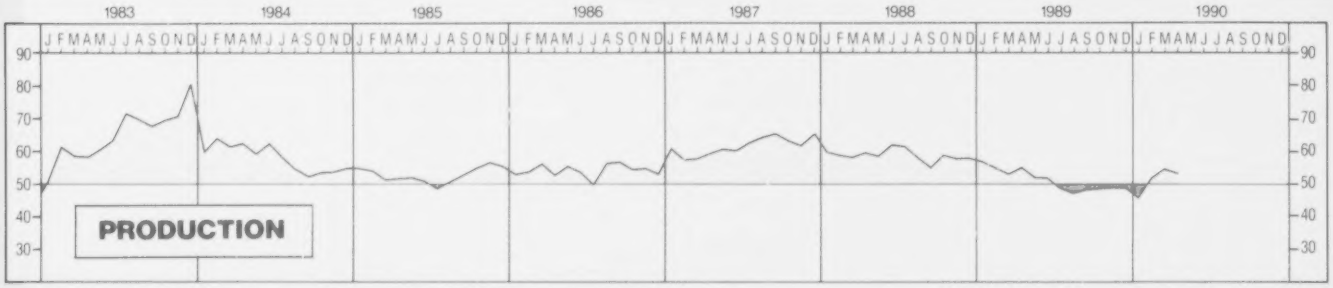
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

April '89	52.7	November '89	46.4
May '89	49.8	December '89	46.7
June '89	48.8	January '90	45.2
July '89	46.2	February '90	48.3
August '89	45.5	March '90	48.8
September '89	46.0	April '90	50.2
October '89	46.9		

The **Purchasing Managers' Index** (PMI) rose to 50.2% in April, up from 48.8% in March and the highest since April 1989 (52.7%). The 50.2% signaled an expansion in the manufacturing economy ending a string of 11 consecutive months of decline which slowed the entire economy. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The previous signs of leveling-off in the 11-month decline in the economy are even more credible now. The index has averaged 48.1% for the first four months of 1990. Past experience indicates that, if this average were to continue for the remainder of 1990, it would be consistent with real GNP growth of about 1.3%."

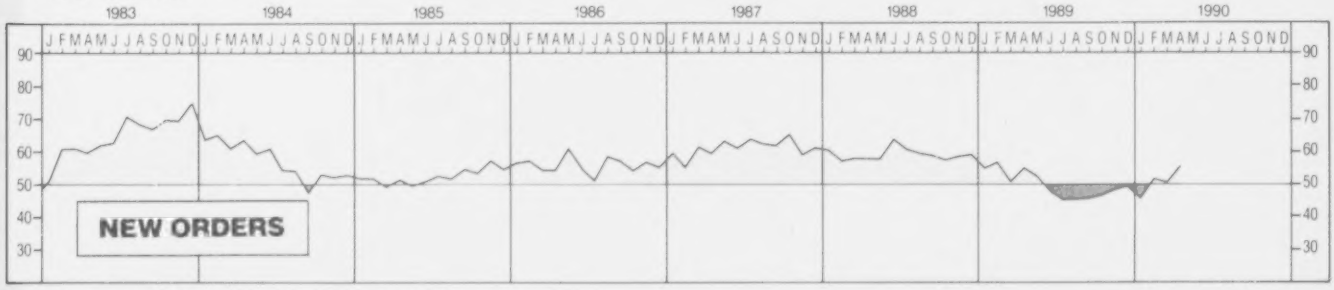
BUSINESS



Peak — July 1981; Trough — November 1982.

April marked the third consecutive month in which Production has expanded. The Production Index fell to 53.0% in April, down somewhat from March (54.4%). Except for March, 53.0% is the highest since last April (54.9%). Given the April surge in New Orders, it would be highly unlikely for Production to decline in the remaining two months of the second quarter.

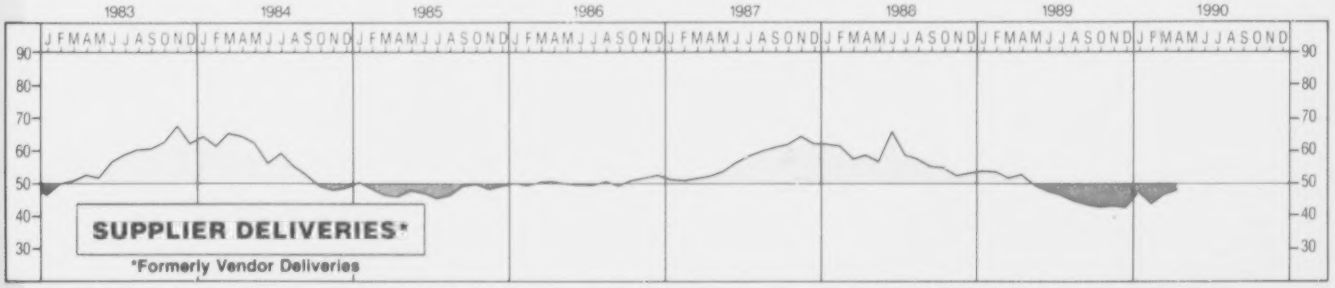
Production	%Better	%Same	%Worse	Net	Index
April 1990	30	54	16	+ 14	53.0
March 1990	28	55	17	+ 11	54.4
February 1990	27	53	20	+ 7	51.5
January 1990	18	56	26	- 8	45.4



Peak — July 1981; Trough — November 1982.

New Orders expanded significantly in April, the third consecutive monthly increase. The New Orders Index rose to 55.5%, from 50.4% in March, and is the highest since February 1989 (56.9%). Once again, strong growth in New Export Orders contributed greatly to the increase in this leading indicator of future growth.

New Orders	%Better	%Same	%Worse	Net	Index
April 1990	36	46	18	+ 18	55.5
March 1990	30	48	22	+ 8	50.4
February 1990	29	48	23	+ 6	51.8
January 1990	23	50	27	- 4	45.8



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in April for the 12th consecutive month, but at the slowest pace in that period, reflecting the increased manufacturing economy. The Supplier Deliveries Index rose to 47.6%, from 45.8% in March, and is the most since June 1989 (also 47.6%).

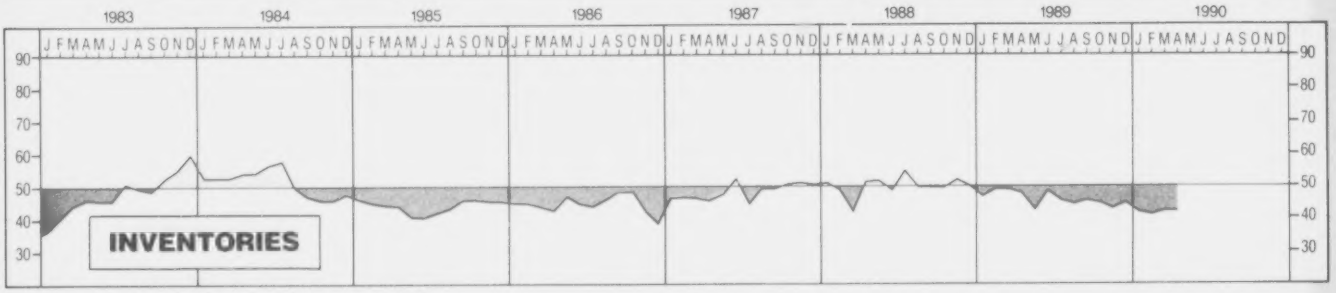
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
April 1990	7	80	13	- 6	47.6
March 1990	5	84	11	- 6	45.8
February 1990	3	80	17	-14	43.3
January 1990	7	82	11	- 4	47.2

IN SHORT SUPPLY

Bearings — 21st consecutive month, a consequence of anti-dumping suits; **Castings** — 15th time in 20 months; **Acetronitrile** — Used to remove tars, phenols, and coloring matter from certain petroleum hydrocarbons and to extract fatty acids from animal and vegetable oils; **Acrylic Acid** — 18th time in 22 months (used in manufacturing plastics); **Electric Motors** — 8th time in 13 months; **Caustic Soda/Soda Ash** — 35th consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Hydrogen Peroxide** — 5th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic); **Silicon Wafers** — Used in making semiconductors and integrated circuits; **Sodium Chlorate** — 11th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used heavily in paper-making and dyeing); **Tetrahydrafuran (THF)** — Heavily used solvent in high polymers, especially polyvinyl chlorate (PVC); **Titanium Dioxide** — 33rd consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (a lead-free pigment used as a whitener in coatings, paints, paper and other industrial applications); **Timber** — Essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut, causing shortages in lumber, chips for paper mills and threatened reduction of log exports to the Pacific Rim.

UP IN PRICE

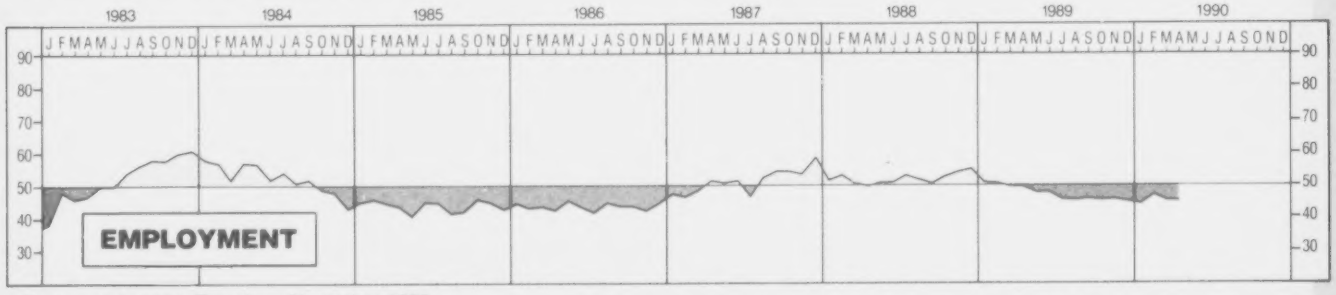
Aluminum — Stiff resistance, equal reports of price decreases; **Copper** — After being reported down in price in February for the 4th consecutive month; **Lead** — Used heavily in making paints, petroleum, pipe, and batteries; **Nickel** — 2nd consecutive month, after being reported down in price in February for the 9th consecutive month (used heavily in making stainless steel, plating metals, and batteries); **Zinc** — 2nd consecutive month, after being reported down in price in February for the 9th time in 10 months, some reports of price decreases (used heavily in metal alloys and as a protective coating for metal); **Castings; Electric Motors** — 7th time in 10 months; **Acetone** — A solvent for fats, oils, waxes, resins, rubber, plastics, lacquer and varnishes; **Caustic Soda/Soda Ash** — 41st consecutive month, primarily as a conse-



Peak — July 1981; Trough — November 1982.

The manufacturing economy did not need to resort to building inventories to achieve growth in April as Inventories declined again for the 17th consecutive month. The Inventories Index remained at 41.6% in April as in March, which was the second lowest since December 1986 (38.4%) with the exception of February 1990 (40.8%).

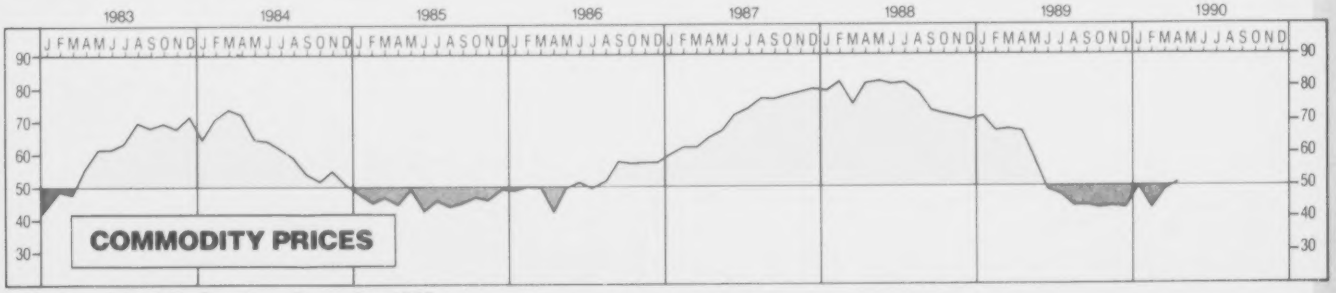
Inventories	%Higher	%Same	%Lower	Net	Index
April 1990	16	53	31	−15	41.6
March 1990	15	56	29	−14	41.6
February 1990	18	50	32	−14	40.8
January 1990	14	56	30	−16	41.8



Peak — July 1981; Trough — November 1982.

Employment declined in April for the 14th consecutive month. The Employment Index was virtually unchanged, falling fractionally to 45.1% from 45.2% in March. Some members continued to reported hiring temporary workers and working overtime to handle the increasing production activity, rather than hiring new employees.

Employment	%Higher	%Same	%Lower	Net	Index
April 1990	14	68	18	− 4	45.1
March 1990	12	70	18	− 6	45.2
February 1990	11	69	20	− 9	46.7
January 1990	8	71	21	−13	44.1



Peak — July 1981; Trough — November 1982.

The increase in the economy was sufficient to cause more purchasing managers to report price increases than decreases. This was the first time this occurred in almost a year. The Price Index rose to 50.8%, up a full two points from March (48.2%) and the most since May 1989 (57.5%). A total of 17 commodities are on the list of items up in price, up from 11 last month.

Prices	%Higher	%Same	%Lower	Net	Index
April 1990	19	68	13	+ 6	50.8
March 1990	13	72	15	− 2	48.2
February 1990	13	59	28	−15	42.2
January 1990	24	56	20	+ 4	49.7

quence of lower demand for co-produced chlorine by paper-makers (used heavily in paper-making, petroleum refining and soap making); **Ethylene** — After being reported down in price in December 1989 for the 8th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Isopropyl Alcohol** — Used in anti-freeze compositions; as a solvent for gums, shellac, essentials; in quick-drying oils and inks, in lotions and cosmetics and in making acetone, glycerol, resins, and gums; **Methanol** — 4th consecutive month, aided by a Brazilian court ruling allowing substitution of 33% methanol into Brazil's most widely used motor fuel (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Freon** — 5th time in 6 months, a consequence of environmental-based production curtailment causing shortages until substitutes go into production in late 1991 (used as a refrigerant in air conditioners and refrigerators); **Polypropylene** — Used heavily in making fabrics, yarns, and carpets; **Polyvinyl Chloride (PVC)** — Used in wire and cable coating, vinyl siding, pipe, tubing, textile finishes, belting, and auto interior; **Corn Sweeteners** — 3rd consecutive month, (used in food processing); **Sugar** — Used in food processing.

DOWN IN PRICE

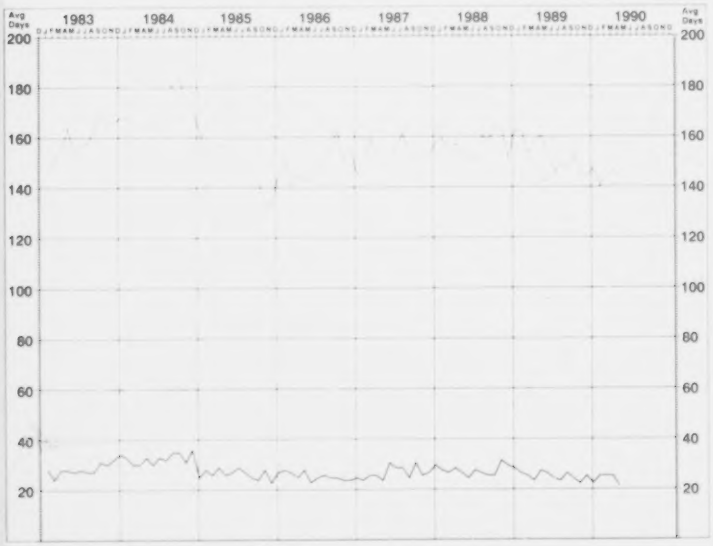
Aluminum — 13th consecutive month but equal reports of price increases; **Aluminum Cans** — Used in packaging beverages; **Steel** — 8th consecutive month; **Stainless Steel** — 5th consecutive month (some reports of price increases); **Linerboard** — 2nd consecutive month, used heavily in making corrugated shipping cartons; **Corrugated Shipping Containers** — 3rd consecutive month; **Benzine** — 3rd consecutive month, after being reported up in price for 3rd consecutive month in December 1989 (used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins); **Ethylene Glycol** — 3rd consecutive month (used heavily in making antifreeze, brake fluid, plastic paint, and ink); **Glycerine** — Used in various ways, especially as a sweetener in confectioneries, cosmetics, soaps, and tobacco; **Phenol** — 8th time in 11 months (used heavily in making phenolic resins); **Plastic Resins** — 4th consecutive month (used in making plastic products); **Fuel Oil** — 3rd consecutive month, after being reported up in price in January 1990 for 4 consecutive months; **Natural Gas** — 3rd consecutive month after being reported up in price in January 1990 for 4 consecutive months; **Propane Gas.**

BUYING POLICY

April initiated a new enhanced method of reporting lead times for commitments to purchase. Using a value of 5 days for Hand-to-Mouth; 30, 60, 90, 180 and 360 days for a year or more; a weighted number average days has been calculated for each of the three categories of purchases. This single measure number will be reported for each month as well as previous months and should make it easier to understand each months status and to relate the current trend within the business cycle and between the categories of purchases. The average lead time for Production Materials in April fell to 44 days, down from 49 days in March and 52 days in January and the lowest since these statistics were first captured. It appears obvious that the trend toward Just-in-Time inventory programs has changed the commitment practices of purchasing executives.

The average lead time for Capital Expenditures in April was 145 days, down slightly from March (147 days).

The average lead time for Maintenance, Repair and Operating (MRO) Supplies in April was 22 days, down from 26 days, the average for the previous three months.

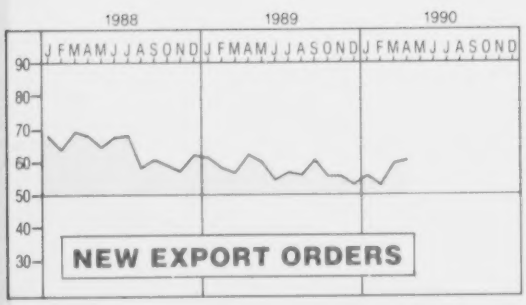


PERCENT REPORTING

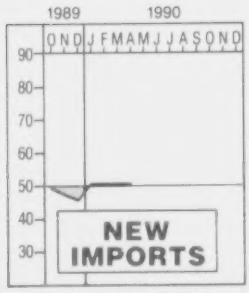
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
April	12	6	13	18	36	15	145
March	11	5	14	18	37	15	147
February	10	8	16	15	36	15	145
January	11	8	13	17	38	13	141

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
April	16	43	28	11	2	0	44
March	19	37	29	10	4	1	49
February	17	40	28	12	2	1	48
January	17	41	25	11	4	2	52

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
April	47	43	8	2	0	0	22
March	39	49	9	2	1	0	26
February	42	47	8	1	2	0	26
January	41	45	11	2	1	0	26



New Export Orders increased in April for the 28th consecutive month. Although not seasonally adjusted, the New Export Orders Index continued to show increased strength, rising to 60.5% in April from 59.5% in March, and is the highest since September 1989 (also 60.5%). The number of members exporting also increased in April to 74%.



Imports barely increased in April, repeating a story told every month so far in 1990. The Imports Index once again registered 50.5%. This apparent stabilization in growth of imports coupled with the increasing growth in exports bodes well for a continued decline in the U.S. trade deficit.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
April 1990	74	28	65	7	+21	60.5
March 1990	71	25	69	6	+19	59.5
February 1990	71	14	78	8	+ 6	53.0
January 1990	73	17	77	6	+11	55.5

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
April 1990	76	12	77	11	+1	50.5
March 1990	78	12	77	11	+1	50.5
February 1990	77	12	77	11	+1	50.5
January 1990	82	12	77	11	+1	50.5

DATA AND METHOD OF PRESENTATION

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Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

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Report On Business®

Economy Increases Again; PMI Rises to 50.7%, Production Index Highest Since January 1989

MAY REPORT

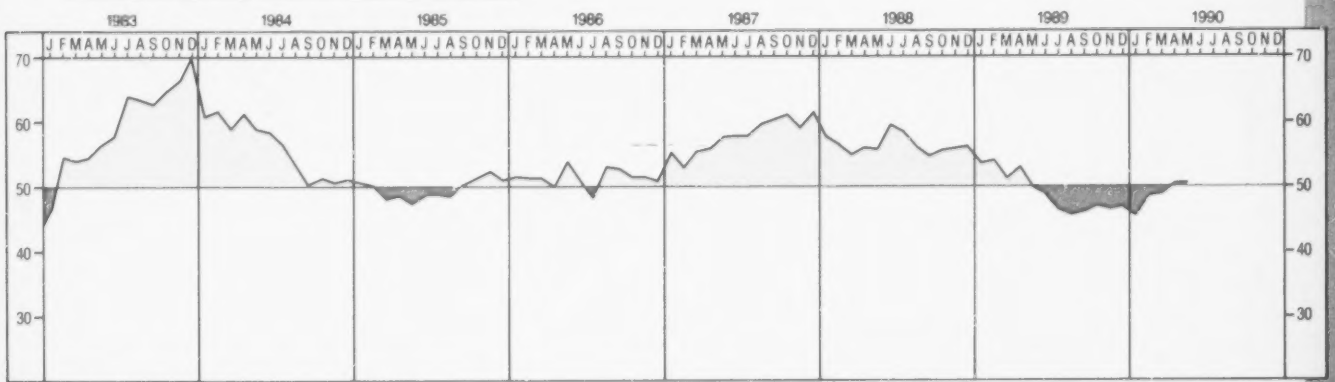
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The manufacturing economy increased for the second consecutive month in May after declining in the previous 11 months, say the nation's purchasing executives in their latest **Report on Business**. The Production Index rose for the fourth consecutive month at the highest rate since January 1989. New Orders also increased for the fourth consecutive month although at a somewhat lower rate than in April. New Export Orders continued to grow although not at the same vigorous rate as in the previous two months. The Imports Index declined in May after two months of neither growth nor decline. (Note: the Imports Index for the past four months has been corrected for previous errors.) As in April, the growth in the economy was not aided by inventory building, since inventories decreased for the 18th consecutive month.

Prices declined in May after increasing in April for the first time since May 1989. Supplier Deliveries were faster in May for the 13th consecutive month, but at the slowest rate since last May. Eight commodities were listed In Short Supply, down from 12 in April. Employment declined for the 15th consecutive month at about the same rate as the previous two months.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The surge in New Orders last month was sufficient to increase Production growth significantly in May. Given the continued strong growth in New Orders in May, it is reasonable to expect the second quarter to finish with modest gains in the overall economy."

PURCHASING MANAGERS' INDEX



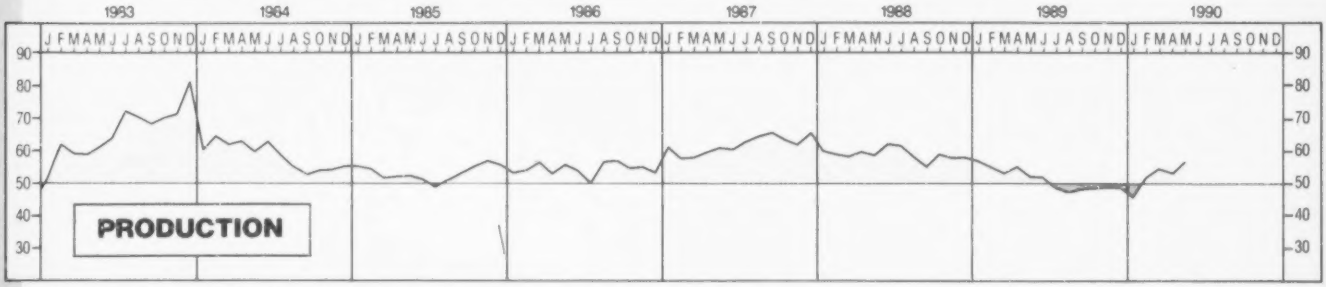
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

May '89	49.8	December '89	46.7
June '89	48.8	January '90	45.2
July '89	46.2	February '90	48.3
August '89	45.5	March '90	48.8
September '89	46.0	April '90	50.2
October '89	46.9	May '90	50.7
November '89	46.4		

The **Purchasing Managers' Index** (PMI) rose for the second consecutive month to 50.7%, up from 50.2% in April. The 50.7% is the highest since April 1989 (52.7%), after which the manufacturing economy declined for 11 consecutive months. A reading above 50 indicates that the manufacturing economy is generally expanding; below 50, that it is generally declining. Bretz added, "The economy in May confirmed previous signs of stabilizing with moderate growth. The index has averaged 48.6% for the first five months of 1990. Past experience indicates that, if this average were to continue for the remainder of 1990, it would be consistent with real GNP growth of about 1.5%."

BUSINESS



Peak — July 1981; Trough — November 1982.

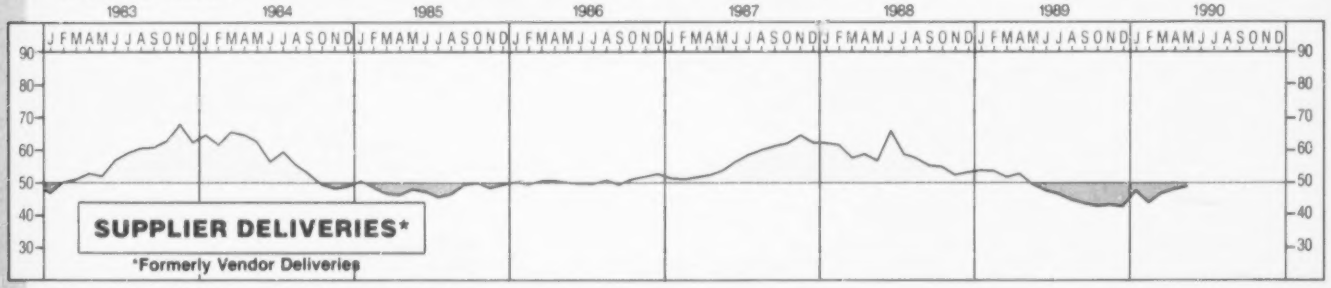
Production increased significantly in May and clearly accounted for the growth in the manufacturing economy. The Production Index rose to 56.3%, up from 53.0% in April, and the most since January 1989 (56.6%). The continued solid advances in New Orders point to a continuation of growth in Production to end the second quarter.

Production	%Better	%Same	%Worse	Net	Index
May 1990	25	62	13	+12	56.3
April 1990	30	54	16	+14	53.0
March 1990	28	55	17	+11	54.4
February 1990	27	53	20	+ 7	51.5

Peak — July 1981; Trough — November 1982.

New Orders increased in May for the fourth consecutive month, although at a slightly lower rate than last month. The New Orders Index fell to 54.8%, down from 55.5% in April. Except for April, the 54.8% is the highest since April 1989 (54.9%) and, accompanied by continued relatively strong New Export Orders, should assure Production growth over the next few months.

New Orders	%Better	%Same	%Worse	Net	Index
May 1990	31	47	22	+ 9	54.8
April 1990	36	46	18	+18	55.5
March 1990	30	48	22	+ 8	50.4
February 1990	29	48	23	+ 6	51.8



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in May for the 13th consecutive month, although at a slower pace than last month. The Supplier Deliveries Index registered 48.6%, up a full point from April (47.6%) and the most since May 1989 (49.5%).

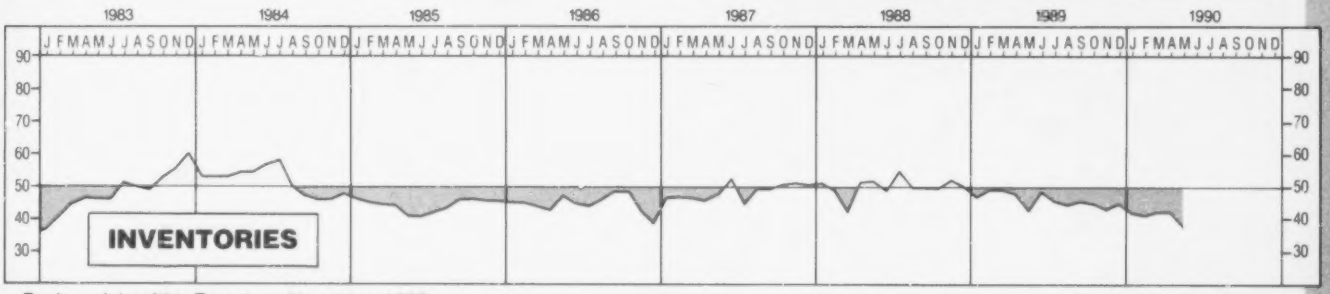
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
May 1990	8	81	11	− 3	48.6
April 1990	7	80	13	− 6	47.6
March 1990	5	84	11	− 6	45.8
February 1990	3	80	17	−14	43.3

IN SHORT SUPPLY

Bearings — 22nd consecutive month, a consequence of anti-dumping suits; **Electric Motors** — 9th time in 14 months; **Caustic Soda/Soda Ash** — 36th consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Hydrogen Peroxide** — 6th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (used as a bleaching agent and, in solution, as a topical cleansing agent and antiseptic); **Silicon Wafers** — 2nd consecutive month (used in making semiconductors and integrated circuits); **Titanium Dioxide** — 34th consecutive month, increasing demand exceeding supply because of switching from chlorine use by paper makers to avoid dioxins (a lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications); **Timber** — 2nd consecutive month; essentially only in the Northwestern U.S., where conservationists' efforts have been successful in reducing the Douglas Fir acreage the government will allow to be cut. This is causing shortages in lumber, chips for paper mills, and a threatened reduction of log exports to the Pacific Rim; **Lemon Juice** — used in food processing and in beverages.

UP IN PRICE

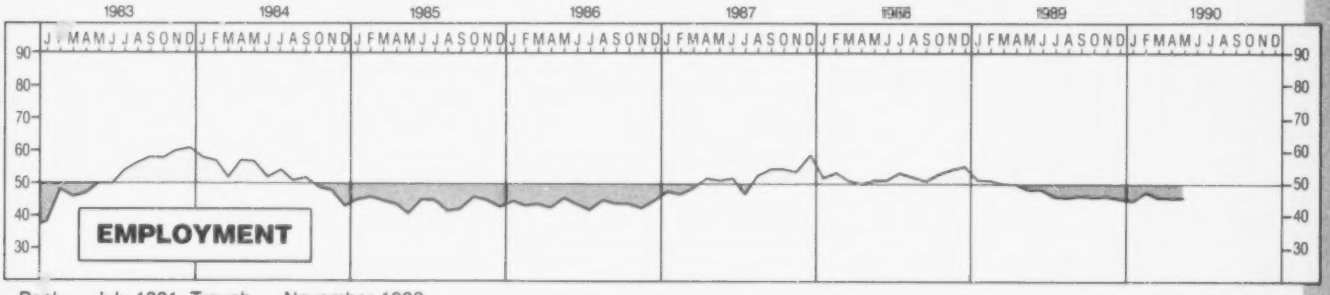
Aluminum — Stiff resistance, equal reports of price decreases; **Copper** — Volatile prices, equal reports of price decreases; **Steel Scrap** — After being reported down in price in February 1990 for 4 consecutive months; **Zinc** — 3rd consecutive month, after being reported down in price in February for the 9th time in 10 months (used heavily in metal alloys and as a protective coating for metal); **Bearings** — 20th time in 23 months, a consequence of anti-dumping suits; **Electric Motors** — 8th time in 11 months; **Caustic Soda/**



Peak — July 1981; Trough — November 1982.

Purchasers improved their record of maintaining production while reducing inventory. Inventories decreased in May, marking the 18th consecutive month of inventory declines. The Inventories Index fell significantly to 37.8%, almost four points lower than April (41.6%). The May percentage is the lowest since January 1983 (36.3%).

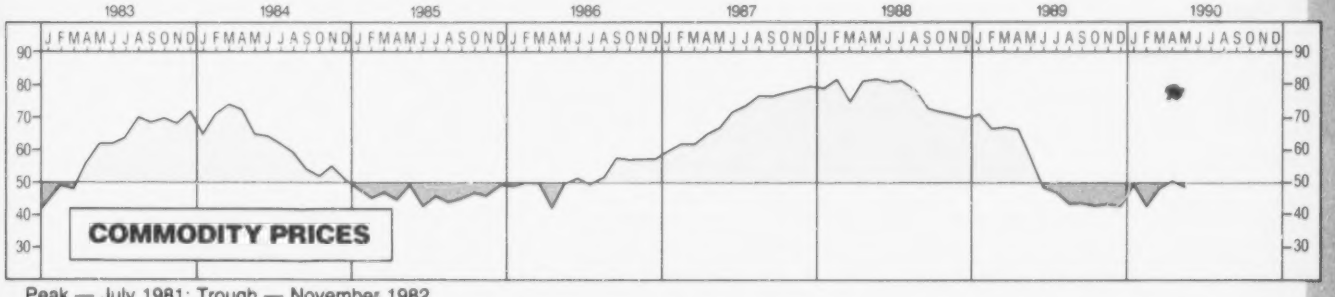
Inventories	%Higher	%Same	%Lower	Net	Index
May 1990	11	58	31	−20	37.8
April 1990	16	53	31	−15	41.6
March 1990	15	56	29	−14	41.6
February 1990	18	50	32	−14	40.8



Peak — July 1981; Trough — November 1982.

Employment declined in May for the 15th consecutive month. The Employment Index rose slightly to 45.5% from 45.1% in April. The growth in production has not convinced employers to increase employment in the manufacturing sector of the economy.

Employment	%Higher	%Same	%Lower	Net	Index
May 1990	13	67	20	− 7	45.5
April 1990	14	68	18	− 4	45.1
March 1990	12	70	18	− 6	45.2
February 1990	11	69	20	− 9	46.7



Peak — July 1981; Trough — November 1982.

Prices declined in May after increasing in April for the first time in almost a year. The Price Index fell to 48.5% from 50.8% in April. The number of commodities reported up in price dropped to 12, down from 17 last month. Conversely, the number of commodities reported lower in price increased to 17, up from 14 in April.

Prices	%Higher	%Same	%Lower	Net	Index
May 1990	11	75	14	− 3	48.5
April 1990	19	68	13	+ 6	50.8
March 1990	13	72	15	− 2	48.2
February 1990	13	59	28	−15	42.2

Soda Ash — 42nd consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper-makers (used heavily in paper-making, petroleum refining and soap making); **Methyl Ethyl Ketone (MEK)** — used heavily as a chemical solvent in surface coatings and in making resins; **Lubrication Additives; Gasoline** — 3rd time in 5 months; **Corn Starch** — 3rd time in 4 months (used heavily in both food processing and paper making); **Milk/Milk Powder** — 4th time in 8 months, a consequence of increased demand for dairy products, fewer dairy cows, exceptionally higher government exports of nonfat dry milk, and very low import quotas of nonfat dry milk (used in food processing).

DOWN IN PRICE

Aluminum — 14th consecutive month but equal reports of price increases; **Copper** — Volatile prices, equal reports of price increases; **Steel** — 9th consecutive month; **Steel Bar; Stainless Steel Plate; Stainless Steel Sheets; Forgings; Linerboard** — 3rd consecutive month, used heavily in making corrugated shipping cartons; **Corrugated Shipping Containers** — 4th consecutive month; **Printing paper; Ethylene** — used heavily in making ethylene oxide, plastic resins, and glycols; **Ethylene Glycol** — 4th consecutive month (used heavily in making antifreeze, brake fluid, plastic paint, and ink); **Phenol** — 9th time in 12 months (used heavily in making phenolic resins); **Plastic Resins** — 5th consecutive month (used in making plastic products); **Fuel Oil** — 4th consecutive month, after being reported up in price in January 1990 for 4 consecutive months; **Natural Gas** — 4th consecutive month after being reported up in price in January 1990 for 4 consecutive months; **Cheese.**

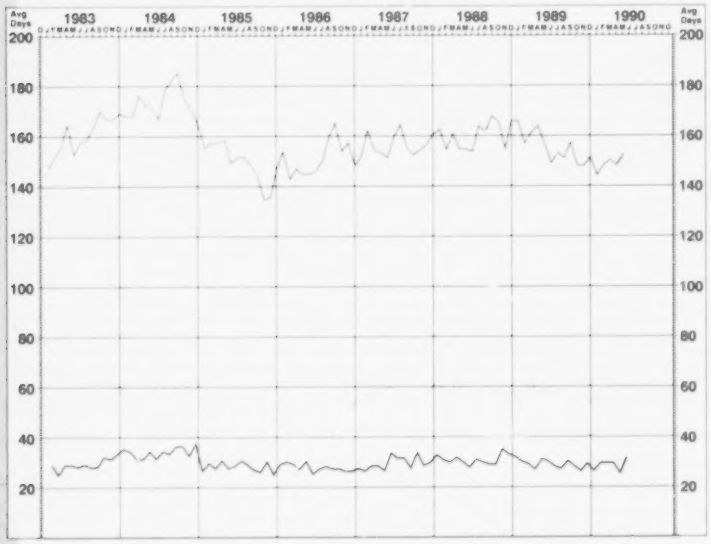
BUYING POLICY

Lead times lengthened for all three categories of purchases.

Lead times for Capital Expenditures increased to 149 average days, up from 145 average days in April. Members indicated certain capital equipment manufactures had increased their backlogs substantially, notably in the process industries such as petroleum refining, chemical, and paper production.

The average days lead time for Production Materials also lengthened to 48 days, up from 44 days last month, but on average, the same as February and March.

Lead times for Maintenance, Repair and Operating (MRO) Supplies lengthened considerably in May. The average days lead time increased to 28 days, up from 22 days in April, and the most since April 1989 (also 28 days).

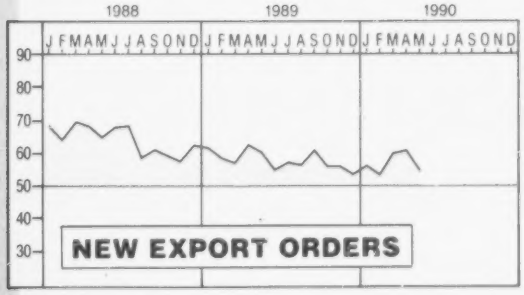


PERCENT REPORTING

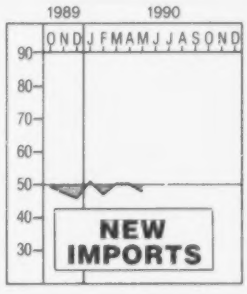
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
May	10	7	10	22	35	16	149
April	12	6	13	18	36	15	145
March	11	5	14	18	37	15	147
February	10	8	16	15	36	15	145

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
May	17	40	27	13	2	1	48
April	16	43	28	11	2	0	44
March	19	37	29	10	4	1	49
February	17	40	28	12	2	1	48

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
May	41	45	10	3	0	1	28
April	47	43	8	2	0	0	22
March	39	49	9	2	1	0	26
February	42	47	8	1	2	0	26



New Export Orders increased for the 29th consecutive month in May. The New Export Orders Index, not yet seasonally adjusted, registered 54.0%, down from 60.5% in April and 59.5% in March. Members exporting increased to 76%, up from 74% in April.



Imports declined in May after two months of neither decline nor growth. It should be noted that the Imports Index previously reported for February, March, and April was in error and that the following figures reflect corrections. The number of members importing was unchanged from April, 76%.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
May 1990	76	17	74	9	+ 8	54.0
April 1990	74	28	65	7	+21	60.5
March 1990	71	25	69	6	+19	59.5
February 1990	71	14	78	8	+ 6	53.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
May 1990	76	8	79	13	−5	47.5
April 1990	76	10	80	10	0	50.0
March 1990	78	9	82	9	0	50.0
February 1990	77	9	75	16	−7	46.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

AC910-1

Report On Business®

Economy Expands Again, PMI Inches up to 51.1%

JUNE REPORT

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The manufacturing economy registered a third consecutive monthly increase in June to close out the second quarter on a high note, say the nation's purchasing executives in their latest **Report on Business.**

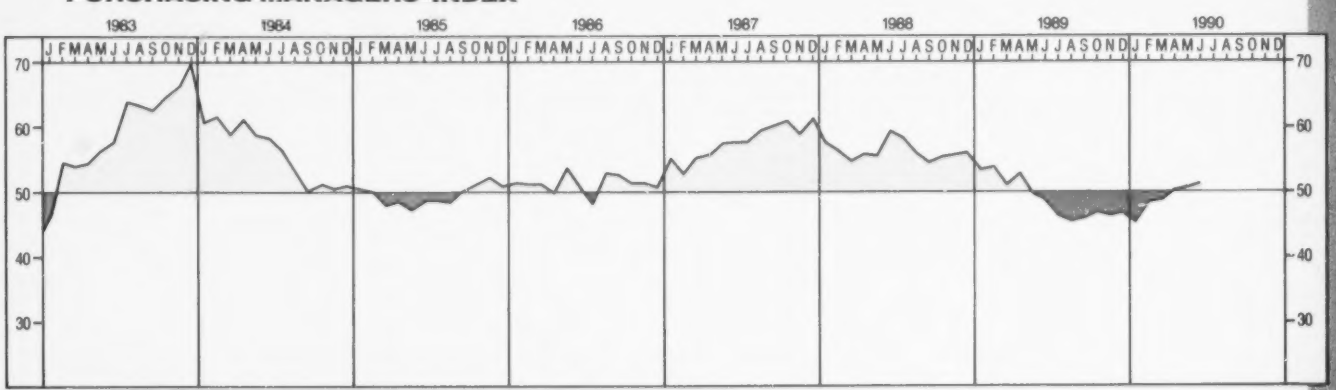
The Production Index rose for the fifth consecutive month, although at a lower rate than in May. New Orders also rose for the fifth consecutive month at virtually the same rate as last month. New Export Orders increased at a more robust rate than in May, while Imports declined for the second consecutive month. Inventories declined for the 19th consecutive month although the rate of decline was the lowest since December 1989.

Supplier Deliveries were slower in June for the first time in 14 months, reflecting the increased demand and lower inventory levels. Prices rose in June for the second time in the last three months, and the Price Index is the highest since May 1989. Employment declined for the 16th consecutive month.

A series of special questions were asked regarding credit conditions. Of the 18% of responding members whose companies initiated requests for new or additional loans or credit from a financial institution since April 1990, only a few experienced any tightened lending restrictions or felt the need to issue commercial credit paper as a substitute. However, a number of members reported that their smaller suppliers or customers were experiencing some difficulties in securing additional credit and that smaller businesses in general were keeping closer control of their receivables.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy ended the second quarter with a moderate, but solid, increase in growth. Manufacturers, with relatively low inventories, were somewhat surprised by the growing demand causing Supplier Deliveries to slow for the first time in over a year. This, combined with a growing number of shortages, enabled prices to increase slightly for the second time in three months. Increased strength in New Orders during the second quarter should provide the basis for a continuation of similar growth as we enter the third quarter."

PURCHASING MANAGERS' INDEX



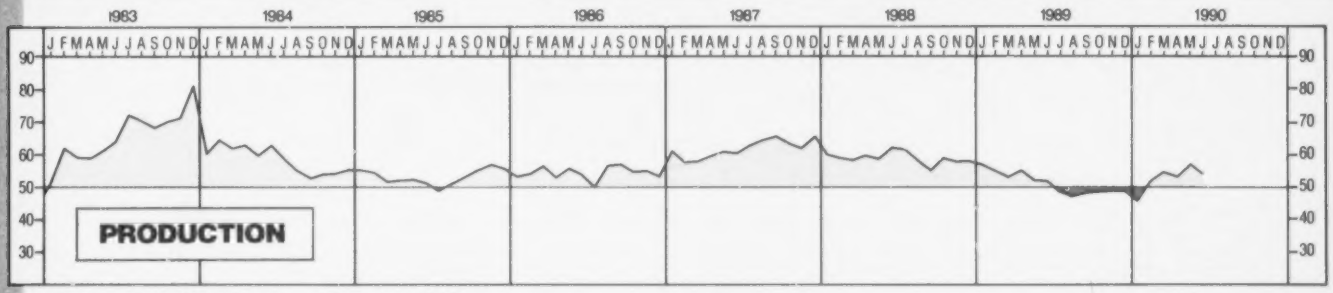
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

June '89	48.8	January '90	45.2
July '89	46.2	February '90	48.3
August '89	45.5	March '90	48.8
September '89	46.0	April '90	50.2
October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7		

The **Purchasing Managers' Index** (PMI) rose to 51.1%, up slightly from 50.7% in May. This marks the third consecutive month in which this leading economic indicator has registered over 50% after declining for 11 consecutive months. A reading above 50 indicates that the manufacturing economy is generally expanding; below 50, that it is generally declining. Bretz added, "The PMI has averaged 49.1% for the first half of 1990. If the June level of the PMI remains unchanged for the balance of the year, the past experience indicates this would be consistent with real GNP growth of about 1.9% for 1990."

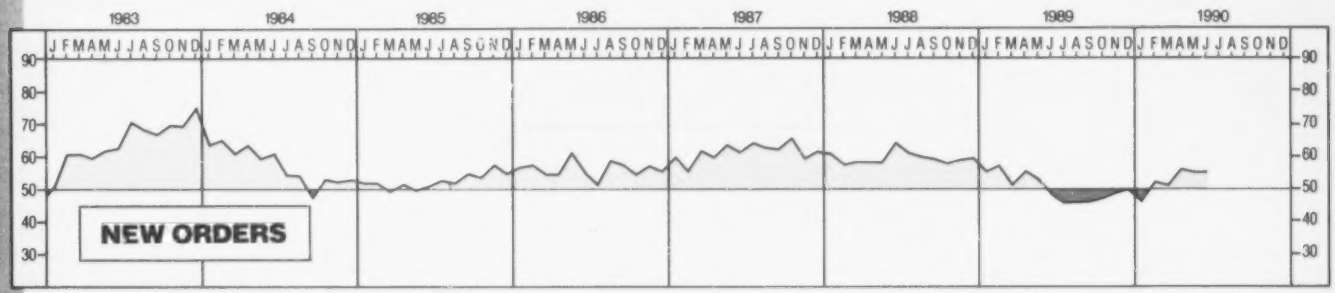
BUSINESS



Peak — July 1981; Trough — November 1982.

Production increased in June for the fifth consecutive month, although at a lower rate of growth than in May. The Production Index dropped to 53.9%, down from 56.3% last month. The consistent growth in New Orders signals continued Production growth as we enter the third quarter.

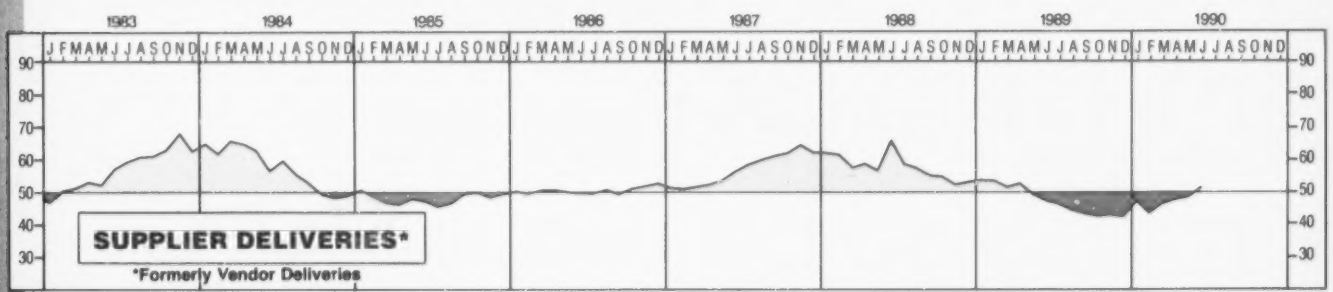
Production	%Better	%Same	%Worse	Net	Index
June 1990	25	58	17	+ 8	53.9
May 1990	25	62	13	+12	56.3
April 1990	30	54	16	+14	53.0
March 1990	28	55	17	+11	54.4



Peak — July 1981; Trough — November 1982.

New Orders increased in June for the fifth consecutive month at virtually the same rate of growth as in May. The New Orders Index inched upward to 54.9% from 54.8% last month. Except for April, the 54.9% is the highest since April 1989 (also 54.9%), and the average of the index in the second quarter is higher than any quarter in 1989. This consistent growth in New Orders over the past three months should be sufficient to sustain moderate production growth over the next few months.

New Orders	%Better	%Same	%Worse	Net	Index
June 1990	28	49	23	+ 5	54.9
May 1990	31	47	22	+ 9	54.8
April 1990	36	46	18	+18	55.5
March 1990	30	48	22	+ 8	50.4



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were slower in June, breaking a string of 13 consecutive months in which Supplier Deliveries were faster. The Supplier Deliveries Index registered 51.2%, the highest since April 1989 (52.6%). This leading indicator confirms the increased demand and growth in the manufacturing economy.

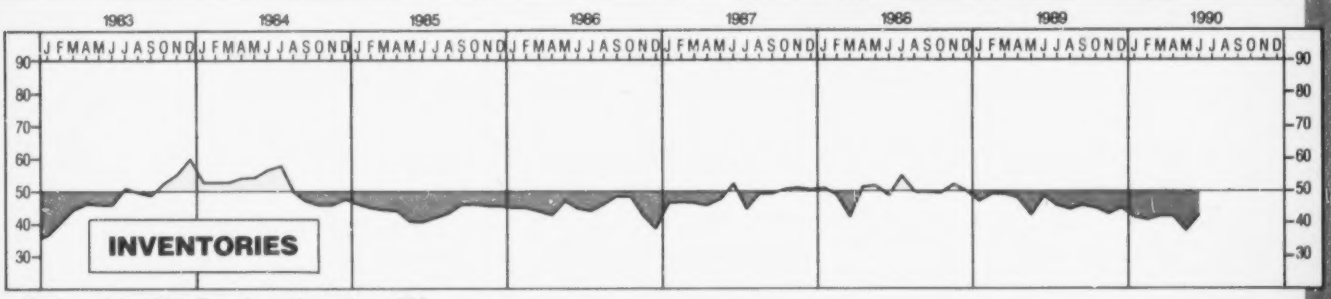
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
June 1990	9	81	10	– 1	51.2
May 1990	8	81	11	– 3	48.6
April 1990	7	80	13	– 6	47.6
March 1990	5	84	11	– 6	45.8

IN SHORT SUPPLY

Bearings — 23rd consecutive month, a consequence of anti-dumping suits; **Compressors**; **Electric Motors** — 10th time in 15 months; **Acrylic Acid** — 19th time in 24 months (used in manufacturing plastics); **Caustic Soda/Soda Ash** — 37th consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Silicon Wafers** — 3rd consecutive month (used in making semiconductors and integrated circuits); **Coated Paper**; **Offset Printing Paper**; **Lemon Juice** — 2nd consecutive month (used in food processing and in beverages); **Nonfat Dry Milk** — Used in food processing.

UP IN PRICE

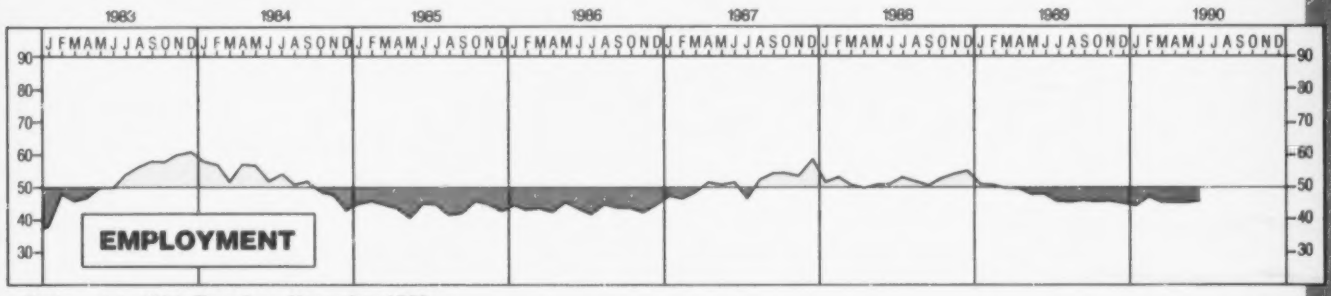
Aluminum — 2nd consecutive month (stiff resistance, equal reports of price decreases); **Copper** — 2nd consecutive month (volatile prices, equal reports of price decreases); **Steel** — Some reports of price decreases; **Steel Scrap** — 2nd consecutive month (after being reported down in price in February 1990 for 4 consecutive months); **Zinc** — 4th consecutive month, fueled by the pressure of labor contract negotiations at mines in Peru and Canada, and a major Canadian smelter (used heavily in metal alloys and as a protective coating for metal); **Offset Printing Paper**; **Newsprint**; **Bearings** — 21st time in 24 months, a consequence of anti-dumping suits; **Acetone** — 2nd time in 3 months (a solvent for fats, oils, waxes, resins, rubber, plastics, lacquers, and varnishes); **Benzene** — Used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins; **Caustic Soda/Soda Ash** — 43rd consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper-makers (used heavily in paper-making, petroleum refining and soap making); **Methyl Ethyl Ketone (MEK)** — 2nd con-



Peak — July 1981; Trough — November 1982.

Purchasers reduced Inventories in June for the 19th consecutive month, although at a significantly lesser rate than in May. The Inventories Index rose to 42.9%, up over five points from 37.8% last month and the highest since December 1989 (44.5%).

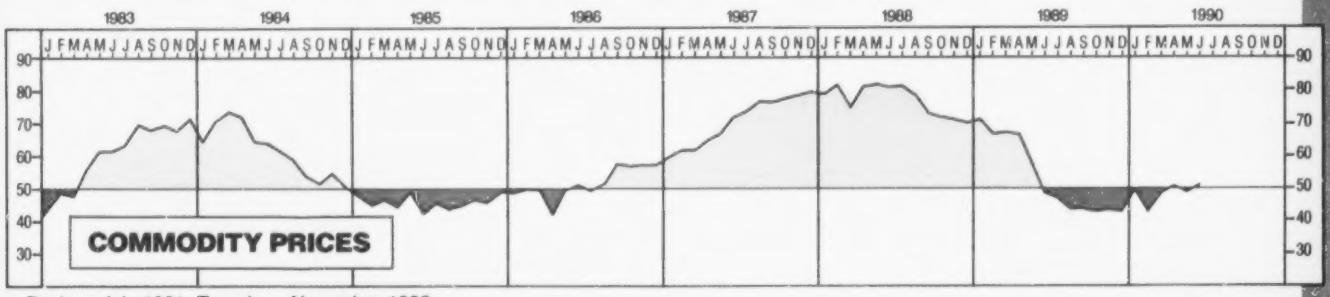
Inventories	%Higher	%Same	%Lower	Net	Index
June 1990	16	54	30	−14	42.9
May 1990	11	58	31	−20	37.8
April 1990	16	53	31	−15	41.6
March 1990	15	56	29	−14	41.6



Peak — July 1981; Trough — November 1982.

Employment declined in June for the 16th consecutive month at a slightly lesser rate than in May. The Employment Index rose to 45.9%, up from 45.5% last month. Employers continue to reduce employment despite the solid five-month increase in production growth. If this dual trend continues, it suggests greater future increases in productivity in the manufacturing economy.

Employment	%Higher	%Same	%Lower	Net	Index
June 1990	13	68	19	− 6	45.9
May 1990	13	67	20	− 7	45.5
April 1990	14	68	18	− 4	45.1
March 1990	12	70	18	− 6	45.2



Peak — July 1981; Trough — November 1982.

Prices rose in June for the second time in the past three months mirroring the improvement in the manufacturing economy. The Price Index rose to 50.9%, up from 48.5% last month, and was the highest since May 1989 (57.5%). The number of commodities reported higher priced rose to 19, up from 12 in May. However, 20 commodities were reported lower priced in June, an increase from 17 in May.

Prices	%Higher	%Same	%Lower	Net	Index
June 1990	17	70	13	+ 4	50.9
May 1990	11	75	14	− 3	48.5
April 1990	19	68	13	+ 6	50.8
March 1990	13	72	15	− 2	48.2

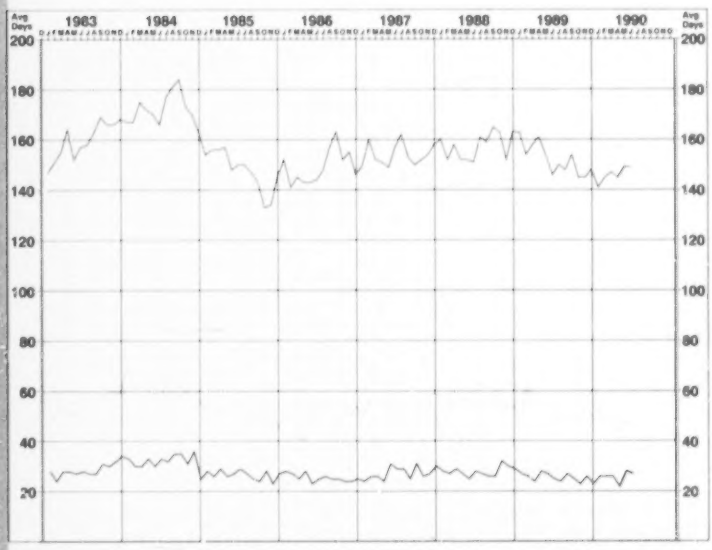
secutive month (used heavily as a chemical solvent in surface coatings and in making resins); **Polypropylene** — 2nd time in 3 months (used heavily in making fabrics, yarns, and carpets); **Styrene (ABS)** — Used chiefly in making synthetic rubber, plastic resins, and plastic; **Sulfuric Acid** — Used heavily in making fertilizers, dyes, adhesives, and other acids; **Zinc Oxide** — Used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper; **Printing Ink**; **Rubber**; **Hydraulics**.

DOWN IN PRICE

Aluminum — 15th consecutive month but equal reports of price increases; **Aluminum Die Cast**; **Aluminum Wire**; **Copper** — 2nd consecutive month (volatile prices, equal reports of price increases); **Lead** — After being reported up in price in April 1990 (used heavily in making paints, petroleum, pipe, and batteries); **Steel** — 10th consecutive month; **Lumber**; **Linerboard** — 4th consecutive month, used heavily in making corrugated shipping cartons; **Corrugated Shipping Containers** — 5th consecutive month; **Ethylene** — 2nd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Methanol** — After being reported up in price in April 1990 for 4th consecutive month (used heavily as a solvent, a motor fuel additive and in synthesizing other chemicals); **Phenol** — 10th time in 13 months (used heavily in making phenolic resins); **Plastic Resins** — 6th consecutive month (used in making plastic products); **Polystyrene** — Used chiefly in making synthetic rubber, plastic resins, and plastic; **DRAMS** — Dynamic electronic memory device used heavily in computers; **Diesel Fuel**; **Fuel Oil** — 5th consecutive month; **Natural Gas** — 5th consecutive month; **Flour.**

BUYING POLICY

Although both Production and New Orders continued to grow in June, lead times either declined or remained unchanged from May. Lead times for Capital Expenditures remained the same as in May, 149 average days. Although unchanged, the 149 average days is the highest since September 1989 (154 average days) and is a reflection of relatively strong demand for Capital Expenditures. Lead times for Production Materials declined slightly to 47 average days, down one day from 48 days in May, but up three days from April (44 days). The average days lead time for Maintenance, Repair and Operating (MRO) Supplies dropped to 27 days, down one day from 28 days in May, but up five days from April (22 days).

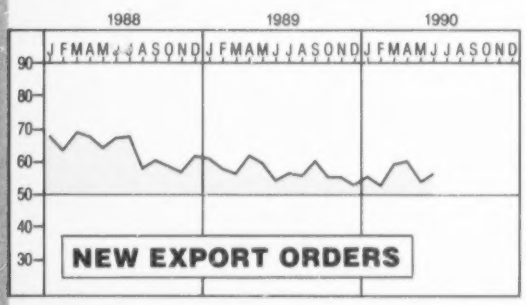


PERCENT REPORTING

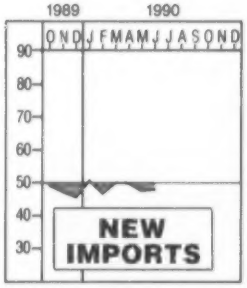
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
June	11	5	14	20	33	17	149
May	10	7	10	22	35	16	149
April	12	6	13	18	36	15	145
March	11	5	14	18	37	15	147

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
June	19	40	28	9	3	1	47
May	17	40	27	13	2	1	48
April	16	43	26	11	2	0	44
March	19	37	29	10	4	1	49

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
June	38	47	12	2	1	0	27
May	41	45	10	3	0	1	28
April	47	43	8	2	0	0	22
March	39	49	9	2	1	0	26



New Export Orders increased in June for the 30th consecutive month, and at a higher rate than in May. The New Export Orders Index, not yet seasonally adjusted, rose to 56.5%, up from 54.0% last month. The number of members exporting in June increased to 77%. This is the highest percentage since February 1988 (also 77%), and the most since this indicator began in January 1988.



Imports declined in June for the second consecutive month. The Imports Index, not yet seasonally adjusted, rose to 48%, up slightly from 47.5% in May. Although the number of members importing rose to 79%, up from 76% last month, Imports have only increased in one month (50.5% in January 1990) since this indicator began in October 1989.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
June 1990	77	20	73	7	+13	56.5
May 1990	76	17	74	9	+ 8	54.0
April 1990	74	28	65	7	+21	60.5
March 1990	71	25	69	6	+19	59.5

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
June 1990	79	8	80	12	−4	48.0
May 1990	76	8	79	13	−5	47.5
April 1990	76	10	80	10	0	50.0
March 1990	78	9	82	9	0	50.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economy Declines in July; PMI Falls to 47.4%; New Orders Decline Sharply

JULY REPORT

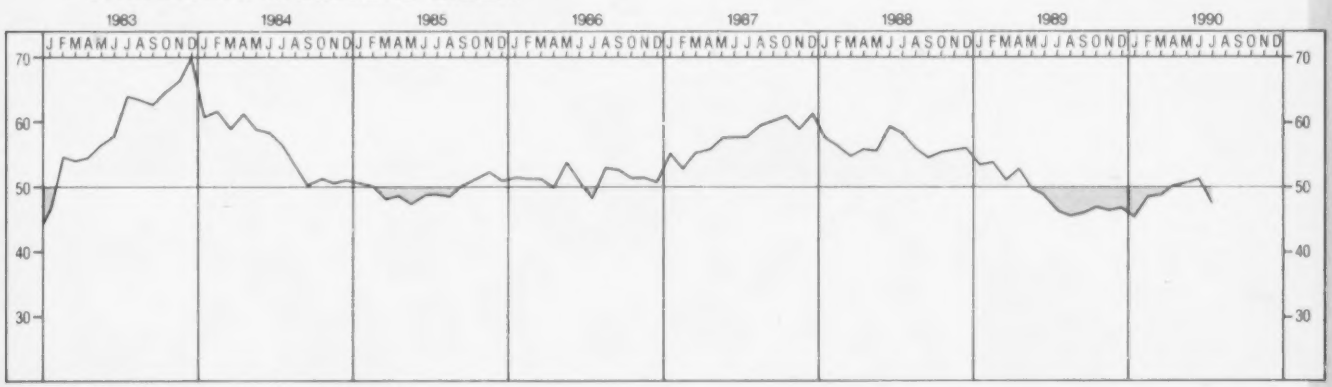
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The manufacturing economy declined in July, reversing a three-month trend of consecutively larger increases, say the nation's purchasing executives in their latest **Report on Business.** The Production Index rose for the sixth consecutive month, but at the lowest rate in that period. New Orders decline in July after registering strong increases in the second quarter. New Export Orders continued to increase while Imports declined for the third consecutive month. Employment declined in July for the 17th consecutive month, although the rate of decline was the lowest since June 1989.

Inventories decreased significantly in July, as purchasing managers decreased purchases and worked off inventories in anticipation of sharply decreasing New Orders. The Supplier Deliveries Index declined, reflecting the decrease in purchases and New Orders. Prices rose in July for the third time in four months, although at a relatively lower pace.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy got off to a bad start in the third quarter, abruptly ending a three-month moderate, but solid, increase in growth. The sharp decline in New Orders apparently caused purchasers to reduce the quantity of purchases and work off existing inventories. The weakness of New Orders in July now casts a shadow over the previous expectations for continued growth in the economy in the third quarter."

PURCHASING MANAGERS' INDEX



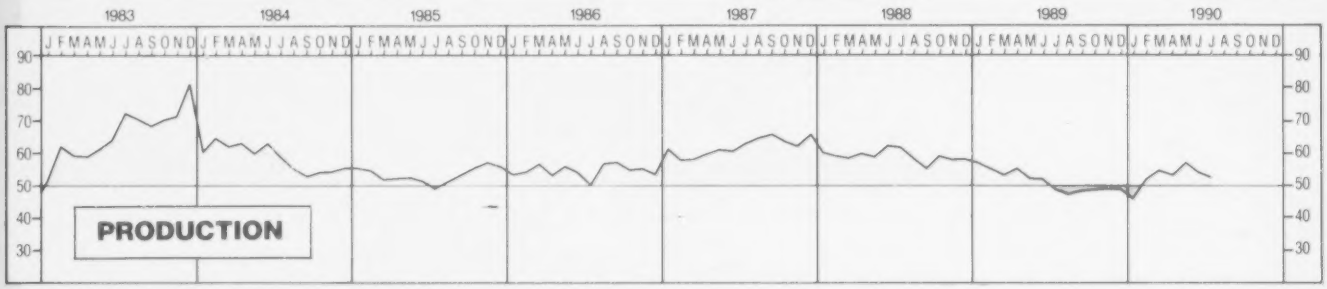
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

July '89	46.2	February '90	48.3
August '89	45.5	March '90	48.8
September '89	46.0	April '90	50.2
October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2		

The **Purchasing Managers' Index** (PMI) decreased to 47.4%, down noticeably from 51.1% in June. The decline ended three consecutive months of increases. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "The PMI has averaged 48.8% for the first seven months of 1990. If the PMI remains unchanged at the July level for the balance of the year, then past experience indicates this would be consistent with real GNP growth of about 1.3% for 1990."

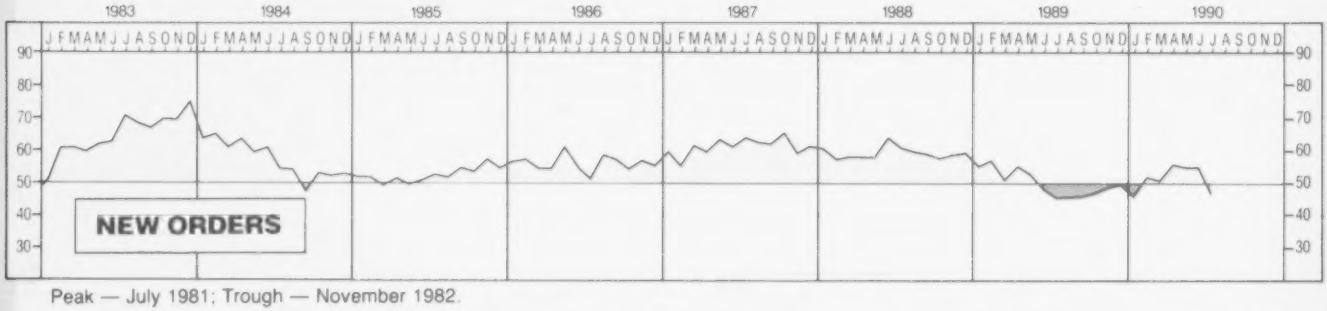
BUSINESS



Peak — July 1981; Trough — November 1982.

Production increased in July for the sixth consecutive month. The Production Index slipped to 52.1%, down from 53.9% in June, and the lowest since February 1990 (51.5%). The decline in New Orders in July will most likely slow growth in production.

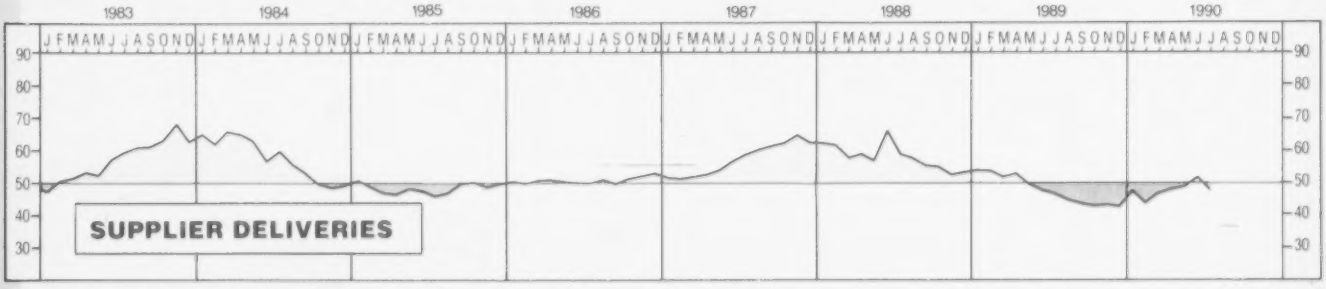
Production	%Better	%Same	%Worse	Net	Index
July 1990	19	58	23	– 4	52.1
June 1990	25	58	17	+ 8	53.9
May 1990	25	62	13	+12	56.3
April 1990	30	54	16	+14	53.0



Peak — July 1981; Trough — November 1982.

New Orders decreased in July reversing five consecutive months of increases. The New Orders Index fell sharply to 46.2% from 54.9% in June, and a 55.1% average for the second quarter. The 46.2% rate is the lowest since January 1990 (45.8%), and will undoubtedly weaken, if not decrease, the recent modest growth in production.

New Orders	%Better	%Same	%Worse	Net	Index
July 1990	19	53	28	– 9	46.2
June 1990	28	49	23	+ 5	54.9
May 1990	31	47	22	+ 9	54.8
April 1990	36	46	18	+18	55.5



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in July for the 14th time in 15 months, as the Supplier Deliveries Index fell to 47.3%. The string of 13 consecutive months of faster Supplier Deliveries (reflecting a slowing economy) was broken in June when the Supplier Deliveries Index rose to 51.2%.

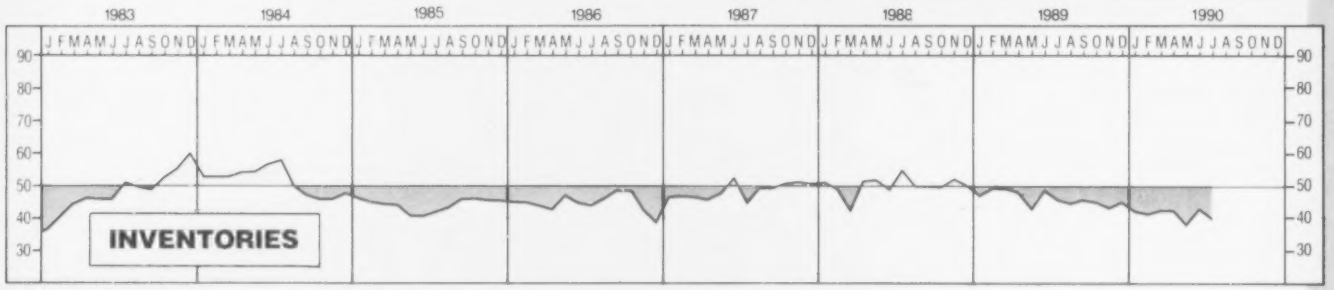
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
July 1990	6	83	11	– 5	47.3
June 1990	9	81	10	– 1	51.2
May 1990	8	81	11	– 3	48.6
April 1990	7	80	13	– 6	47.6

IN SHORT SUPPLY

Zinc — Used heavily in metal alloys and as a protective coating for metal; **Bearings** — 24th consecutive month, a consequence of anti-dumping suits; **Electric Motors** — 11th time in 16 months; **Caustic Soda/Soda Ash** — 38th consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Freon; Styrene** — Used chiefly in making synthetic rubber, plastic resins, and plastic; **Silicon Wafers** — 4th consecutive month (used in making semiconductors and integrated circuits); **Coated Paper** — 2nd consecutive month; **Offset Printing Paper** — 2nd consecutive month.

UP IN PRICE

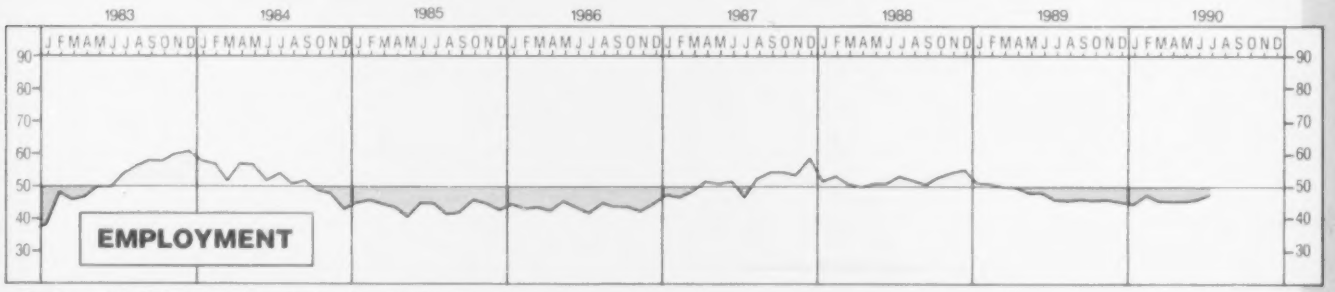
Copper — 3rd consecutive month, some reports of price decreases; **Lead** — Used heavily in making paints, petroleum pipe, and batteries; **Rhodium** — Used heavily as an alloy with platinum, a corrosion-resistant electroplate, and in making high-reflectivity mirrors; **Steel** — 2nd consecutive month; **Steel bar; Zinc** — 5th consecutive month, fueled by the pressure of labor contract negotiations at mines in Peru and Canada, and a major Canadian smelter (used heavily in metal alloys and as a protective coating for metal); **Offset Printing Paper** — 2nd consecutive month; **Bearings** — 22nd time in 25 months, a consequence of anti-dumping suits; **Acetone** — 3rd time in 4 months (a solvent for fats, oils, waxes, resins, rubber, plastics, lacquers, and varnishes); **Caustic Soda/Soda Ash** — 44th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper-makers (used heavily in paper-making, petroleum refining and soap making); **Methyl Ethyl Ketone (MEK)** — 3rd consecutive month (used heavily as a chemical solvent in surface coatings and in making resins); **Propylene Oxide** — Used heavily in preparation of polyethers to form polyurethanes, propylene and dipropylene glycols, lubricants, surfactants and oil demulsifiers; **Sulfur;**



Peak — July 1981; Trough — November 1982.

Inventories declined for the 20th consecutive month at a greater pace than last month. The Inventories Index fell almost four points in July to 39.3%, down from 42.9% in June. Purchasers reported cutting back on the volume of purchases in July and obviously consumed existing inventories. This action reaffirms the purchasers' objective to promptly respond to reduce inventories whenever production rates are lower than projected, and as in July, New Orders decline significantly.

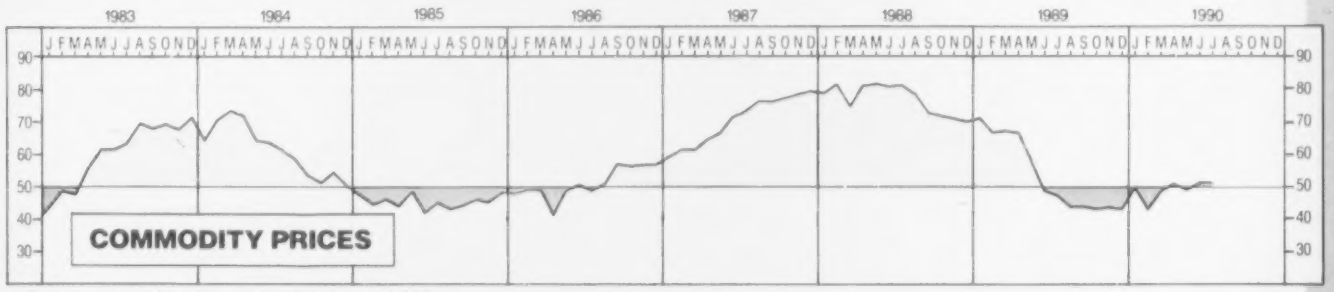
Inventories	%Higher	%Same	%Lower	Net	Index
July 1990	10	55	35	- 25	39.3
June 1990	16	54	30	- 14	42.9
May 1990	11	58	31	- 20	37.8
April 1990	16	53	31	- 15	41.6



Peak — July 1981; Trough — November 1982.

Employment decreased in July for the 17th consecutive month although at a slightly lesser rate than last month. The Employment Index rose to 47.2%, up from 45.9% in June. Although still declining, July is the fourth consecutive month in which the rate of decline has lessened from the previous month.

Employment	%Higher	%Same	%Lower	Net	Index
July 1990	13	70	17	- 4	47.2
June 1990	13	68	19	- 6	45.9
May 1990	13	67	20	- 7	45.5
April 1990	14	68	18	- 4	45.1



Peak — July 1981; Trough — November 1982.

Prices rose in July for the second consecutive month and the third time in the past four months. The Price Index registered 50.9%, identical to June. Although the rates of increase in June and July are only slightly above the 50% mark, they are the highest since May 1989 (57.5%).

Prices	%Higher	%Same	%Lower	Net	Index
July 1990	12	77	11	+ 1	50.9
June 1990	17	70	13	+ 4	50.9
May 1990	11	75	14	- 3	48.5
April 1990	19	68	13	+ 6	50.8

Sulfuric Acid, — 2nd consecutive month (used heavily in making fertilizers, dyes, adhesives, and other acids); **Toluene** — Used heavily in making explosives, dyes and benzoic acid; also as a solvent in paint and as a gasoline additive; **Zinc Oxide** — 2nd consecutive month (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick setting cement, and copier paper); **Dyes, Textile; Cotton Fabric; Barley** — Used heavily in food processing and in making malt for beer; **Corn** — Used heavily in making sweeteners, starches, and alcohol; **Corn Sweeteners** — Used in food processing; **Soybean Oil** — Used heavily in food processing.

DOWN IN PRICE

Aluminum — 16th consecutive month, but some reports of price increases; **Aluminum Die Cast** — 2nd consecutive month; **Magnesium; Steel Scrap; Lumber** — 2nd consecutive month; **Linerboard** — 5th consecutive month (used heavily in making corrugated shipping cartons); **Corrugated Shipping Containers** — 6th consecutive month; **Ethylene** — 3rd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** — Used heavily in making antifreeze, brake fluid, plastic paint, and ink; **Glycerine; Methanol** — 2nd consecutive month, after being reported up in price in April 1990 for 4th consecutive month (used heavily as a solvent, a motor fuel additive and in synthesizing other chemicals); **Phenol** — 11th time in 13 months (used heavily in making phenolic resins); **Plastic Resins** — 7th consecutive month (used in making plastic products); **Polypropylene** — Used heavily in making fabrics, yarns, and carpets; **Connectors; DRAMS** — 2nd consecutive month, dynamic electronic memory device used heavily in computers; **Fuel Oil** — 6th consecutive month; **Natural Gas** — 6th consecutive month; **Propane; Flour** — 2nd consecutive month.

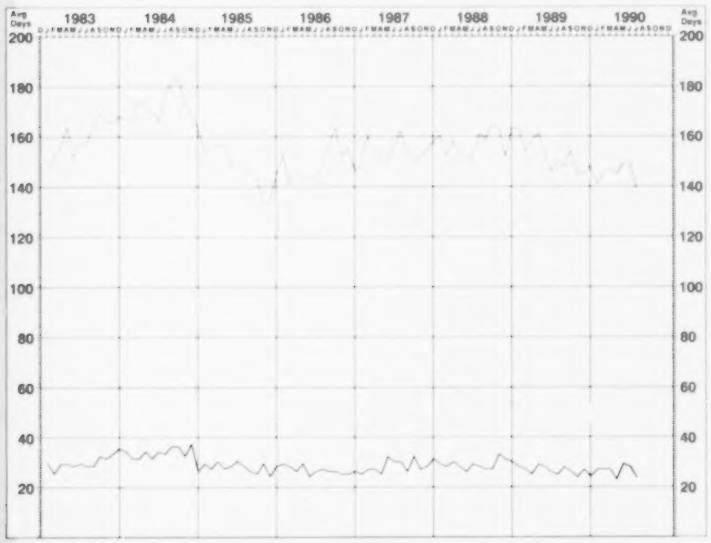
BUYING POLICY

Overall lead times for Production Materials lengthened in July while lead times for Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies contracted.

Lead times for Capital Expenditures shortened significantly. The averagey lead time of 139 days in July is down from 149 days in June and, more importantly, the lowest since November 1985 (134 days).

Lead times for Production Materials increased to 49 average days, up slightly from 47 average days in June and the most since March 1990 (also 49 average days).

The average lead time for Maintenance, Repair and Operating (MRO) Supplies fell to 23 average days, down sharply from 27 average days in June, and 28 average days in May, but still one more than in April 1990 (22 average days).

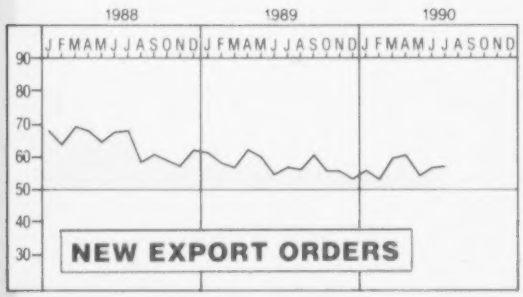


PERCENT REPORTING

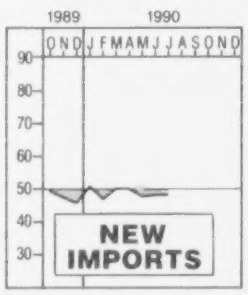
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
July	14	4	13	22	33	14	139
June	11	5	14	20	33	17	149
May	10	7	10	22	35	16	149
April	12	6	13	18	36	15	145

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
July	20	38	28	10	2	2	49
June	19	40	28	9	3	1	47
May	17	40	27	13	2	1	48
April	16	43	28	11	2	0	44

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
July	43	44	11	2	0	0	23
June	38	47	12	2	1	0	27
May	41	45	10	3	0	1	28
April	47	43	8	2	0	0	22



New Export Orders increased in July for the 31st consecutive month. The New Export Order Index rose to 57.0%, up from 56.5% in June. This index is not yet seasonally adjusted. The number of members exporting decreased to 74%, down from 77% in June. Thus, exports continue to bolster the manufacturing economy as they have for some time.



Imports declined for the third consecutive month. The Imports Index, not yet seasonally adjusted, registered 48.0%, identical to June. The number of members importing decreased to 76%, down from 79% last month, and duplicating April and May. The continued slowing of imports and growing of exports suggests a gradual decrease in the U.S. trade deficit.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
July 1990	74	24	66	10	+14	57.0
June 1990	77	20	73	7	+13	56.5
May 1990	76	17	74	9	+ 8	54.0
April 1990	74	28	65	7	+21	60.5

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
July 1990	76	9	78	13	−4	48.0
June 1990	79	8	80	12	−4	48.0
May 1990	76	8	79	13	−5	47.5
April 1990	76	10	80	10	0	50.0

DATA AND METHOD OF PRESENTATION

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Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economy Continues Decline; PMI Slips to 47.0%; Price Index Highest in 16 Months

AUGUST REPORT

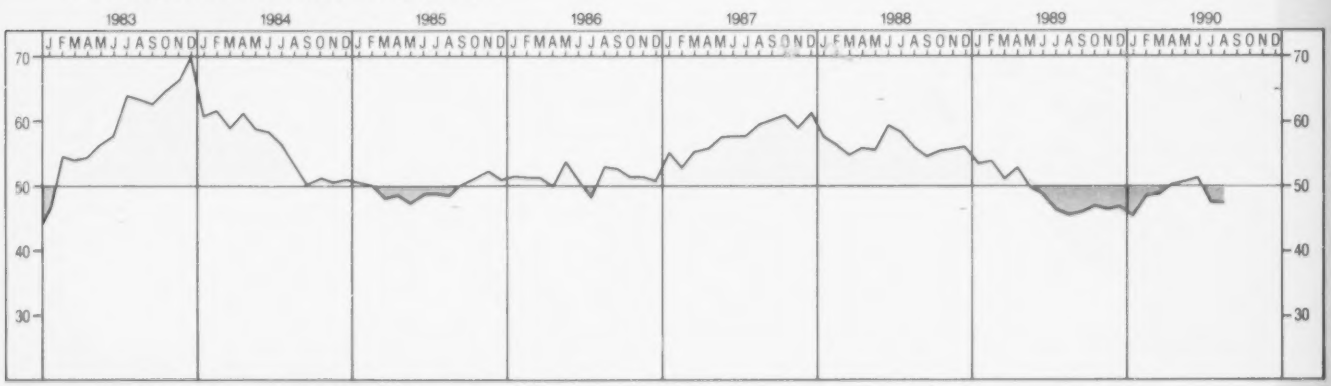
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The manufacturing economy continued to decline in August, for the second consecutive month, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the first time since January 1990. New Orders declined for the second consecutive month. New Export Orders continued to increase in August, although at the slowest pace since February 1990. Imports declined for the fourth consecutive month. Employment declined in August for the 18th consecutive month at the greatest rate since January 1990.

Supplier Deliveries were slower in August. The Price Index rose sharply, largely as a consequence of the Iraqi invasion, and is the highest since April 1989. Inventories decreased, although at a slightly lesser rate than in July, as some purchasers indicated building their inventories selectively to delay the impact of announced price increases.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy declined further in August. The sharp decline in New Orders in July resulted in the first decline in Production in seven months. Continued weakness in New Orders suggests a further decline unless purchasers can artificially stimulate the economy by building inventories in petroleum-related commodities in order to assure availability and to delay anticipated price increases."

PURCHASING MANAGERS' INDEX



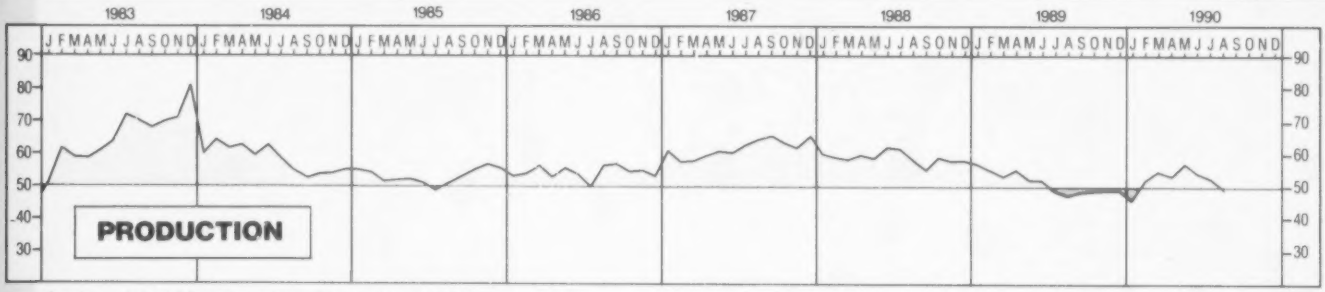
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

August '89	45.5	March '90	48.8
September '89	46.0	April '90	50.2
October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3		

The **Purchasing Managers' Index** (PMI) slipped to 47.0%, down from 47.4% in July and the second consecutive decline after three previous months of continuous increases. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "If the PMI remains unchanged at the August level for the balance of the year, then past experience indicates this would be consistent with real GNP growth of about 1.3% for 1990. The PMI would have to fall below 44% before indicating a decline in real GNP."

BUSINESS



Peak — July 1981; Trough — November 1982.

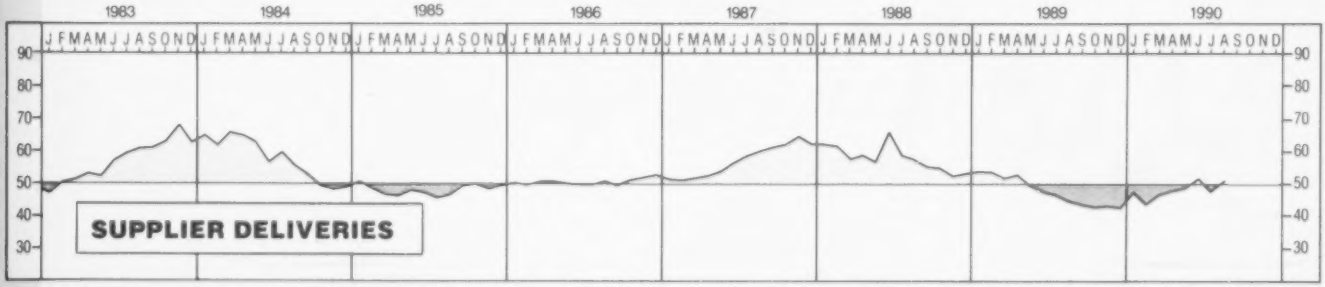
The sharp drop in New Orders in July resulted in the first decline in Production in seven months. The Production Index declined in August to 48.5%, down from 52.1% in July and the lowest since January 1990 (45.4%). The continued weakness in New Orders in August does not augur well for an increase in Production in September.

Production	%Better	%Same	%Worse	Net	Index
August 1990	20	54	26	– 6	48.5
July 1990	19	58	23	– 4	52.1
June 1990	25	58	17	+ 8	53.9
May 1990	25	62	13	+12	56.3

Peak — July 1981; Trough — November 1982.

New Orders declined in August for the second consecutive month, although at a somewhat lesser rate than last month. The New Orders Index rose to 46.4%, up from 46.2% in July. Except for July, the 46.4% is the lowest since January 1990 (45.8%).

New Orders	%Better	%Same	%Worse	Net	Index
August 1990	21	49	30	– 9	46.4
July 1990	19	53	28	– 9	46.2
Junel 1990	28	49	23	+ 5	54.9
May 1990	31	47	22	+ 9	54.8



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were slower in August for the second time in three months. The Supplier Deliveries Index rose to 51.1%, up from 47.3% in July but similar to June (51.2%). Nevertheless, there was little change from July in the number of commodities reported in short supply.

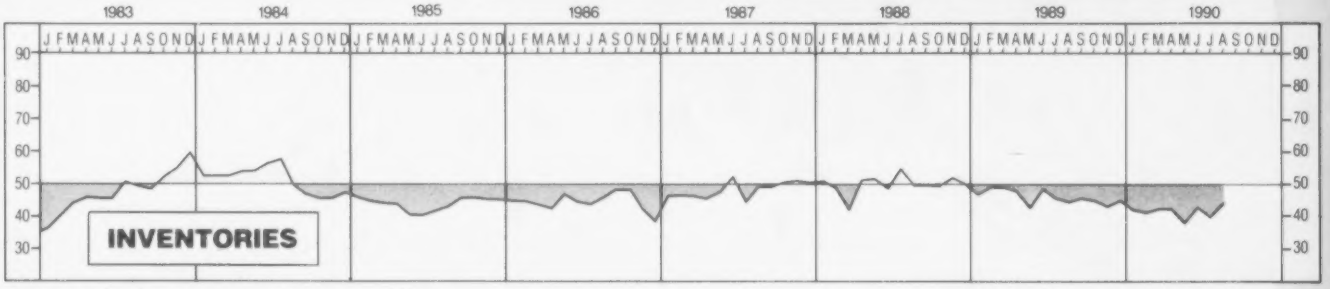
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
August 1990	7	87	6	+ 1	51.1
July 1990	6	83	11	– 5	47.3
June 1990	9	81	10	– 1	51.2
May 1990	8	81	11	– 3	48.6

IN SHORT SUPPLY

Acetonitrile — Used to remove tars, phenols, and coloring matter from certain petroleum hydrocarbons and to extract fatty acids from animal and vegetable oils; **Acrylic Acid** — Used in manufacturing plastics; **Bearings** — 25th consecutive month, a consequence of anti-dumping suits; **Electric Motors** — 12th time in 17 months; **Caustic Soda/Soda Ash** — 39th consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Freon** — 2nd consecutive month (used as a refrigerant and as an aerosol propellant); **Styrene** — 2nd consecutive month (used chiefly in making synthetic rubber, plastic resins, and plastic); **Offset Printing Paper** — 3rd consecutive month; **Silicon Wafers** — 5th consecutive month (used in making semiconductors and integrated circuits); and **Lemon Juice.**

UP IN PRICE

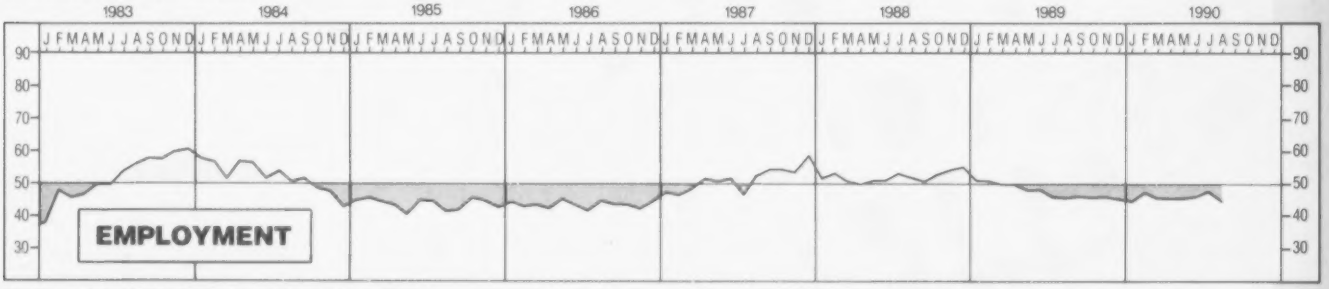
Aluminum — Equal reports of price decreases; **Copper** — 4th consecutive month, some reports of price decreases; **Lead** — 2nd consecutive month (used heavily in making paints, petroleum pipe, and batteries); **Nickel** — After being reported down in price in June; **Rhodium** — 2nd consecutive month (used heavily as an alloy with platinum, a corrosion-resistant electroplate, and in making high-reflectivity mirrors); **Steel Scrap**; **Offset Printing Paper** — 3rd consecutive month; price increase announced for September 1; **Bearings** — 23rd time in 26 months, a consequence of anti-dumping suits; **Caustic Soda/Soda Ash** — 45th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by paper-makers; **Phthalic Anhydride** — Used heavily in making artificial resins, benzoic acid, and phthalates; **Polyvinyl Alcohol** — Used heavily in molding plastic compounds, surface coatings, textile sizing, inks for plastics and glass, in pharmaceuticals and cosmetics; **Propylene** — Used heavily in making polypropylene plastic & other chemicals; **Propylene Glycol** — Used as a nontoxic antifreeze, a solvent for pharmaceuticals, a substitute for ethylene glycol, an emulsifier



Peak — July 1981; Trough — November 1982.

Inventories declined for the 21st consecutive month, although at a lesser rate than in the previous seven months. The Inventories Index rose to 44.1%, up significantly from last month (39.3%) and the highest since December 1989 (44.5%). Some members reported bringing in selected commodities earlier than needed in order to delay the impact of announced price increases.

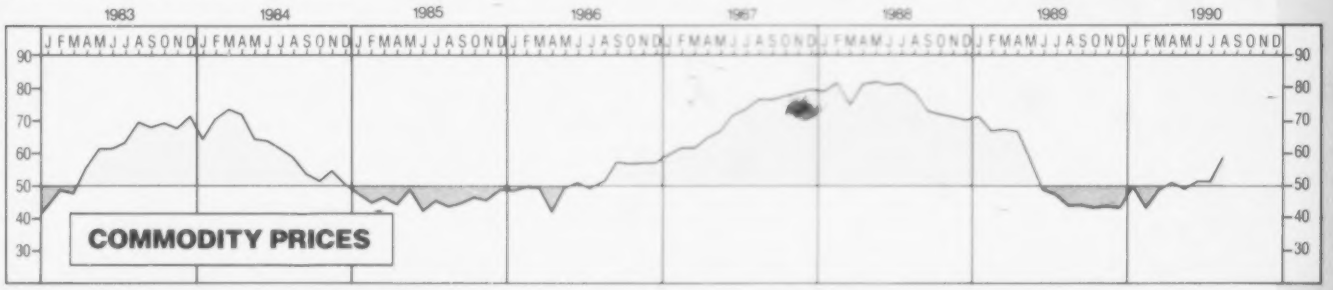
Inventories	%Higher	%Same	%Lower	Net	Index
August 1990	16	57	27	-11	44.1
July 1990	10	55	35	-25	39.3
June 1990	16	54	30	-14	42.9
May 1990	11	58	31	-20	37.8



Peak — July 1981; Trough — November 1982.

Employment decreased in August for the 18th consecutive month at a slightly greater rate than in July. The Employment Index fell to 44.1%, down from 47.2% last month. This is the lowest rate since January 1990 (also 44.1%) and reflects manufacturers adjustment in employment levels to mirror the decline in business.

Employment	%Higher	%Same	%Lower	Net	Index
August 1990	9	68	23	-14	44.1
July 1990	13	70	17	- 4	47.2
June 1990	13	68	19	- 6	45.9
May 1990	13	67	20	- 7	45.5



Peak — July 1981; Trough — November 1982.

Prices rose in August as a consequence of anticipated, if not actual, price increases in crude oil and petrochemical feed stocks. Industries feeling the brunt of the August price increases were plastics, primary metals, paper, petroleum, and chemicals. The Price Index rose to 58.2%. Purchasers expressed concern that in spite of no apparent shortages, suppliers will take advantage of future uncertainties by raising prices further.

Prices	%Higher	%Same	%Lower	Net	Index
August 1990	22	68	10	+12	58.2
July 1990	12	77	11	+ 1	50.9
June 1990	17	70	13	+ 4	50.9
May 1990	11	75	14	- 3	48.5

in foods, and in making synthetic resins; **Solvents; Styrene** — Used chiefly in making synthetic rubber, plastic resins, and plastic; **Diesel Fuel; Gasoline; Fuel Oil** — After being reported down in price in July for the 6th consecutive month; **Petroleum Products; Propane** — After being reported down in price in July; **Lemon Juice; Orange Juice; Peanuts; Soybean Oil** — 2nd consecutive month.

DOWN IN PRICE

Aluminum — 17th consecutive month, but equal reports of price increases; **Magnesium** — 2nd consecutive month (used heavily as a constituent of light alloys for manufacturing precision instruments); **Platinum; Steel** — After being reported up in price in July for 2nd consecutive month; **Zinc** — After being reported up in price in July for 5th consecutive month; **Lumber** — 3rd consecutive month; **Linerboard** — 6th consecutive month (used heavily in making corrugated shipping cartons); **Wood Pulp** — Used in making all grades of paper & linerboard; **Corrugated Shipping Containers** — 7th consecutive month; **Antifreeze; Ethylene** — 4th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** — 2nd consecutive month (used heavily in making antifreeze, brake fluid, plastic paint, and ink); **Glycerine** — 2nd consecutive month (used in various ways, especially as a sweetener in confectioneries, cosmetics, soaps, and tobacco); **Methanol** — 3rd consecutive month; after being reported up in price in April 1990 for 4th consecutive month; **Phenol** — 12th time in 15 months; **Plastic Resins** — 8th consecutive month; **Polyethylene; Polyester Yarn; DRAMS** — 3rd consecutive month; **Natural Gas** — 7th consecutive month; **Corn** — After being reported up in price in July; **Black Pepper; Sugar.**

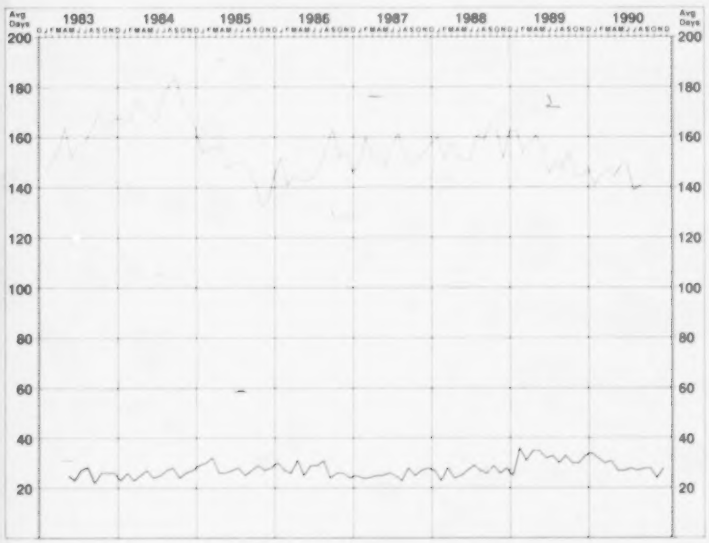
BUYING POLICY

Overall lead times did not change significantly in August for any of the three categories of purchases.

Lead times for Capital Expenditures increased slightly in August to 141 days, up from 139 days in July, which was the lowest since November 1985 (134 days).

The average lead time for Production Materials decreased to 48 days, down slightly from 49 days in July and at the average for the past four months.

The average lead time for Maintenance, Repair and Operating (MRO) Supplies was 25 days in August, up two days from last month.

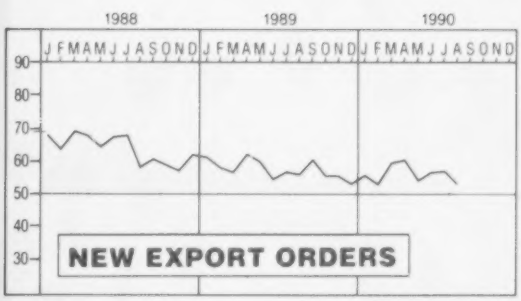


PERCENT REPORTING

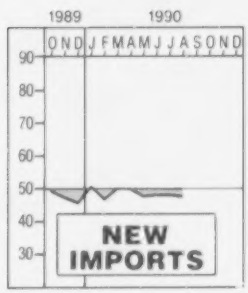
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
August	13	5	16	23	29	16	141
July	14	4	13	22	33	14	139
June	11	5	14	20	33	17	149
May	10	7	10	22	35	16	149

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
August	20	37	29	10	3	1	48
July	20	38	28	10	2	2	49
June	19	40	28	9	3	1	47
May	17	40	27	13	2	1	48

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
August	46	40	10	3	1	0	25
July	43	44	11	2	0	0	23
June	38	47	12	2	1	0	27
May	41	45	10	3	0	1	28



New Export Orders increased in August for the 32nd consecutive month, but at a slower pace than last month. The New Export Order Index, not yet seasonally adjusted, registered 53.0%, down from 57.0% in July and the lowest since February 1990 (also 53.0%). The number of members exporting rose slightly to 75% from 74% last month.



Imports declined for the fourth consecutive month. The Imports Index, not yet seasonally adjusted, slipped to 47.5%, down slightly from 48.0% in July. The number of members importing rose to 77%, up from 76% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
August 1990	75	16	74	10	+ 6	53.0
July 1990	74	24	66	10	+14	57.0
June 1990	77	20	73	7	+13	56.5
May 1990	76	17	74	9	+ 8	54.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
August 1990	77	7	81	12	- 5	47.5
July 1990	76	9	78	13	- 4	48.0
June 1990	79	8	80	12	- 4	48.0
May 1990	76	8	79	13	- 5	47.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economy Weakest Since December 1982; PMI Falls to 44.4%; Price Index Highest in 25 Months

SEPTEMBER REPORT

Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

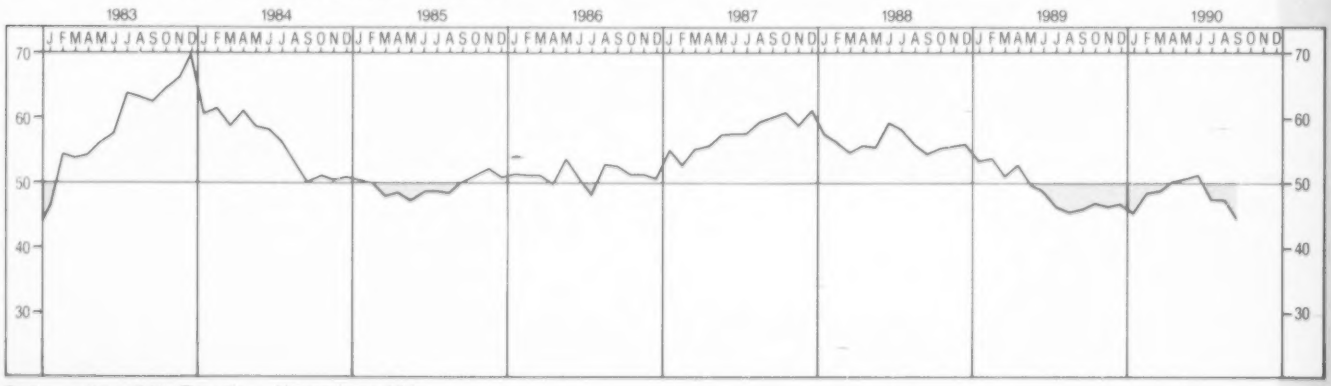
The manufacturing economy declined in September, for the third consecutive month to the lowest level since December 1982, which was the first complete month of the current economic expansion, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the second consecutive month to its lowest level since December 1982. The New Order Index declined for the third consecutive month and is the lowest since the trough of the previous recession, November 1982. New Export Orders continued to increase in September. However, the Imports Index declined for the fifth consecutive month and is the lowest since December 1989.

Supplier Deliveries were faster in September, reflecting the declining economy. Inventories decreased for the 22nd consecutive month at a greater rate than in August. The Employment Index declined for the 19th consecutive month at the greatest rate in five years. The Price Index inflated sharply in September to the highest level since August 1988, almost entirely as a result of the Middle East crisis.

In answer to a special question regarding capital spending plans for the next 6 to 12 months as a result of the Middle East crisis, 88% of respondents said their plans had not changed, 8% said they were revised downward, and 4% were revised upward. In another special question, of the 69% of the respondents who said they initiated requests for new or additional credit from financial institutions since June 1990, 96.5% said they encountered no additional difficulty and 3.5% reported tightened lending conditions.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The manufacturing economy ended the third quarter on a sour note. The sharp decline in New Orders in July and August has led to a decline in Production. The continued weakness in New Orders signals no relief in the near future. Coupled with sharply rising prices for petroleum-related products spawned by the Middle East crisis, the immediate outlook appears to be the worst of all combinations, a declining economy with rising inflation."

PURCHASING MANAGERS' INDEX



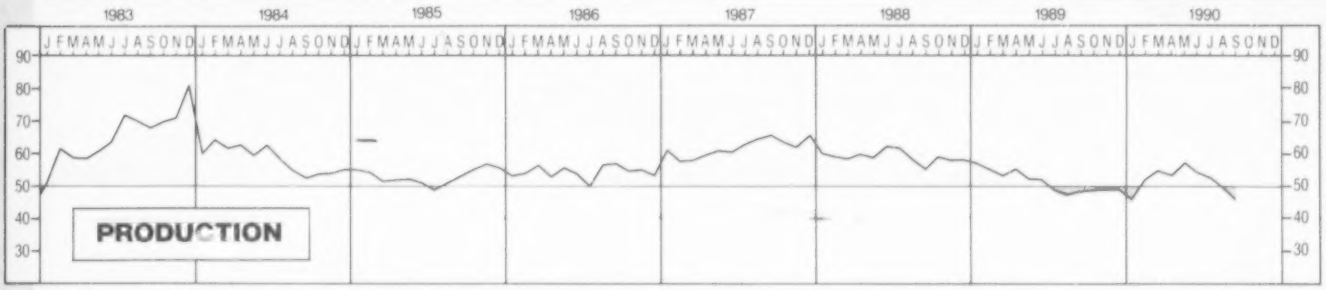
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

September '89	46.0	April '90	50.2
October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8		

The **Purchasing Managers' Index** (PMI) fell to 44.4%, down significantly from 47.0% in August and marked the third consecutive decline. The 44.4% is the lowest this leading indicator has registered since December 1982, at the outset of this long economic recovery. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "If the PMI remains unchanged at the September level for the remainder of the year, then past experience indicates this would be consistent with real GNP growth of about 1.0% for all of 1990. The PMI would have to fall below 44% before indicating a decline in real GNP, a point which has suddenly drawn very near."

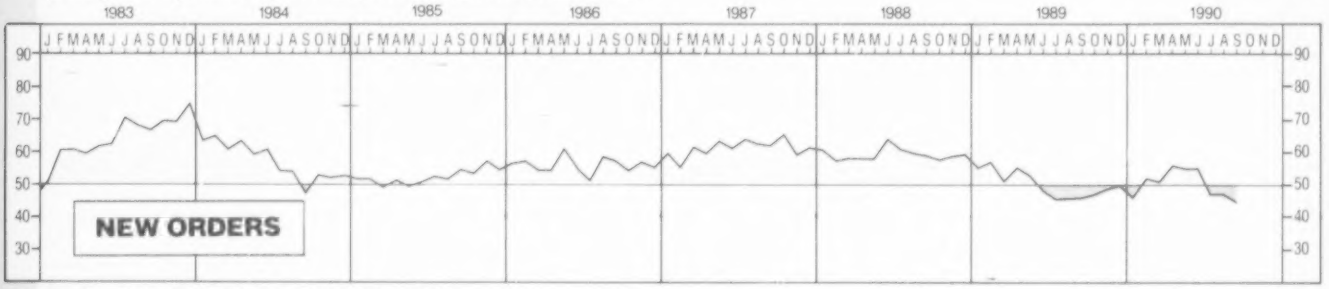
BUSINESS



Peak — July 1981; Trough — November 1982.

The sharp decline in New Orders in July and August resulted in the second consecutive decline in Production in eight months. The Production Index decreased to 45.1% from 48.5% in August, and is the lowest since December 1982, which was the first complete month of the current economic recovery. Continued underlying weakness in New Orders presages no significant improvement in Production in the near future.

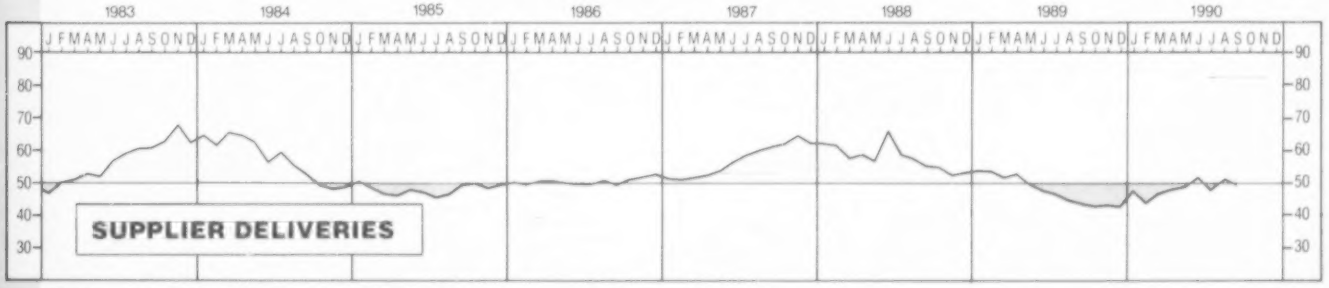
Production	%Better	%Same	%Worse	Net	Index
September 1990	23	48	29	− 6	45.1
August 1990	20	54	26	− 6	48.5
July 1990	19	58	23	− 4	52.1
June 1990	25	58	17	+ 8	53.9



Peak — July 1981; Trough — November 1982.

New Orders declined in September for the third consecutive month. The New Orders Index fell to 44.5%, down from 46.4% in August. The 44.5% is at the lowest level since November 1982 (41.5%), at the trough of the past recession, and suggests continued weakness in the economy as we enter the final quarter of 1990.

Production	%Slower	%Same	%Faster	Net	Index
September 1990	23	47	30	− 7	44.5
August 1990	21	49	30	− 9	46.4
July 1990	19	53	28	− 9	46.2
June 1990	28	49	23	+ 5	54.9



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in September, resuming the trend exhibited for all but two months of the year. The Supplier Deliveries Index dropped to 49.4%, down from 51.1% in August. Apparently the Middle East situation has not resulted in any supply problems for purchasers as the number of commodities reported in short supply decreased to seven in September from 10 last month.

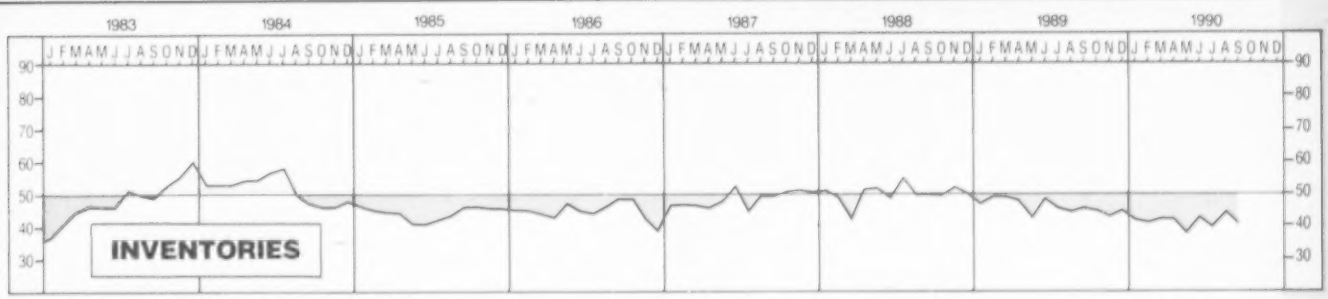
Production	%Slower	%Same	%Faster	Net	Index
September 1990	7	85	8	− 1	49.4
August 1990	7	87	6	+ 1	51.1
July 1990	6	83	11	− 5	47.3
June 1990	9	81	10	− 1	51.2

IN SHORT SUPPLY

Bearings — 26th consecutive month, a consequence of anti-dumping suits; **Castings; Caustic Soda/Soda Ash** — 40th consecutive month (used heavily in paper-making, petroleum refining and soap-making); **Diethylene Glycol** — Used in antifreeze solutions, and as a sealing, finishing and lubricating agent; **Freon** — 3rd consecutive month (used as a refrigerant and as an aerosol propellant); **Methyl Ethyl Ketone (MEK)** — Used heavily as a chemical solvent in surface coatings and making resins; **Styrene** — 3rd consecutive month (used chiefly in making synthetic rubber, plastic resins and plastic).

UP IN PRICE

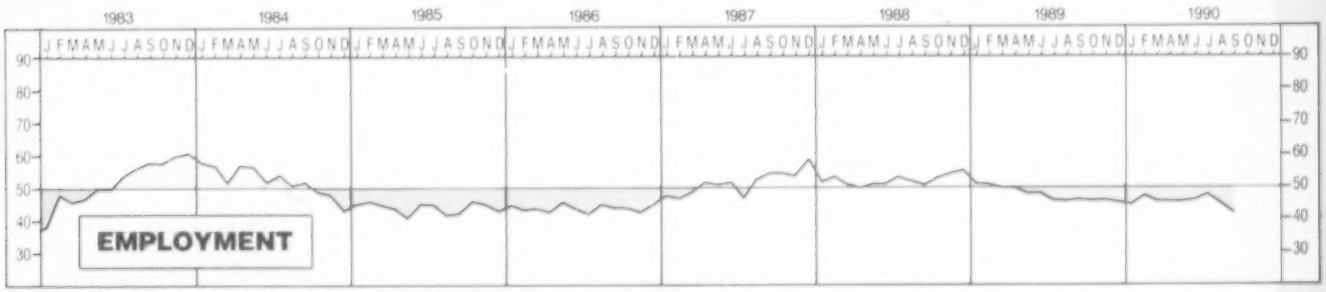
Aluminum — After mixed reports of both price increases and decreases in 4 of the previous 5 months; **Copper** — 6th consecutive month, after mixed reports of both price increases and decreases in 4 of the previous 5 months; **Nickel** — 2nd consecutive month, after being reported down in price in June; **Steel Scrap** — 2nd consecutive month; **Steel Pipe; Offset Printing Paper** — 4th consecutive month; **Antifreeze** — After being reported down in price in August; **Alcohol**; **Base Oils**; **Benzene** — Used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins; **Caustic Soda/Soda Ash** — 46th consecutive month, primarily as a consequence of lower demand for co-produced chlorine by papermakers; **Diethylene Glycol** — Used in antifreeze solutions, and as a sealing, finishing, and lubricating agent; **Ethylene** — After being reported down in price in August for 4th consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Freon; Glycerine** — After being reported down in price in August (used in various ways, especially as a sweetener in confectioneries, cosmetics, soaps, and tobacco); **Glycols (Ethylene and Propylene)** — After Ethylene Glycol was reported down in price in August for 2nd consecutive month; **Lube Additives** — Chemical additives for making lubricating oil and grease; **Methyl Ethyl Ketone (MEK)**; **Phthalic Anhydride** — 2nd consecutive month (used heavily in making artificial resins, benzoic acid, and phthalates); **Solvents** — 2nd consecutive month; **Sulfur** — Used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp, and a variety of industrial uses; **Sulfuric Acid; Toluene** — Used heavily in making explosives, dyes, and



Peak — July 1981; Trough — November 1982.

Inventories declined again in September for the 22nd consecutive month and at a greater rate than in August. The Inventories Index fell to 40.8%, down from 44.1% last month. Some members indicated they have already or will soon be bringing in selected commodities earlier than required in order to delay the impact of announced price increases.

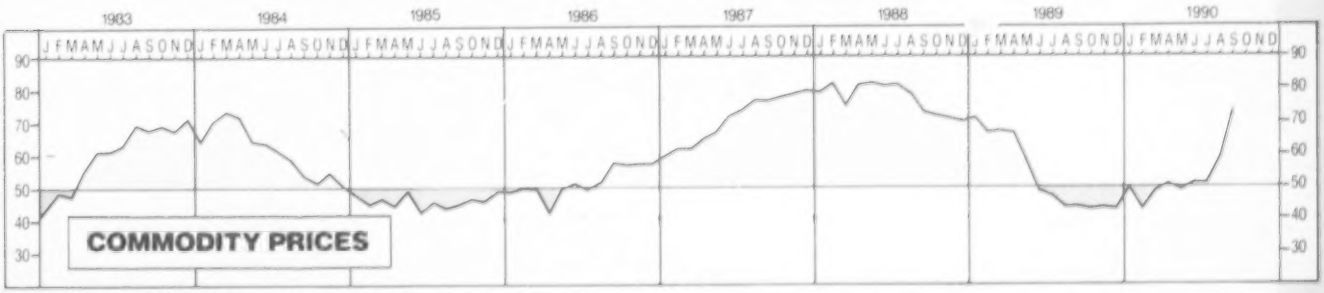
Production	%Higher	%Same	%Lower	Net	Index
September 1990	12	59	29	–17	40.8
August 1990	16	57	27	–11	44.1
July 1990	10	55	35	–25	39.3
June 1990	16	54	30	–14	42.9



Peak — July 1981; Trough — November 1982.

Employment declined in September for the 19th consecutive month at a greater rate than in August. The Employment Index fell to 41.5%, down from 44.1% last month. This is the lowest rate in over five years since August 1985 (41.1%), and suggests manufacturers are adjusting employment levels to mirror the decline in the economy.

Production	%Higher	%Same	%Lower	Net	Index
September 1990	8	65	27	–19	41.5
August 1990	9	68	23	–14	44.1
July 1990	13	70	17	– 4	47.2
June 1990	13	68	19	– 6	45.9



Peak — July 1981; Trough — November 1982.

Prices rose sharply for the second consecutive month, once again largely related to crude oil and petrochemical feed stocks and derivatives, such as plastic resins. The Price Index surged to 73.4% in September, up from 58.2% in August. The increase in the index of 15.2 points was the largest one-month increase in 15 years since August 1975 (15.8 points).

Production	%Higher	%Same	%Lower	Net	Index
September 1990	50	44	6	+44	73.4
August 1990	22	68	10	+12	58.2
July 1990	12	77	11	+ 1	50.9
June 1990	17	70	13	+ 4	50.9

benzoic acid, as a solvent in paint and as a gasoline additive; **Xylene** — Used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Plastic Resins** — After being reported down in price in August for 8th consecutive month; **Polyethylene; Polypropylene** — Used heavily in making fabrics, yarns, and carpets; **Propylene** — 2nd consecutive month (used heavily in making polypropylene plastic and other chemicals); **Latex; Rubber; Styrene** — 2nd consecutive month; **Asphalt; Carbon Black; Diesel Fuel** — 2nd consecutive month; **Gasoline** — 2nd consecutive month; **Fuel Oil** — 2nd consecutive month after being reported down in price in July for 6th consecutive month; **Petrochemicals; Petroleum Products** — 2nd consecutive month; **Peanuts** — 2nd consecutive month; **Transportation Charges** — Surcharges added to existing rates for truck, rail, and air freight as a consequence of significant increases in transportation fuels.

DOWN IN PRICE

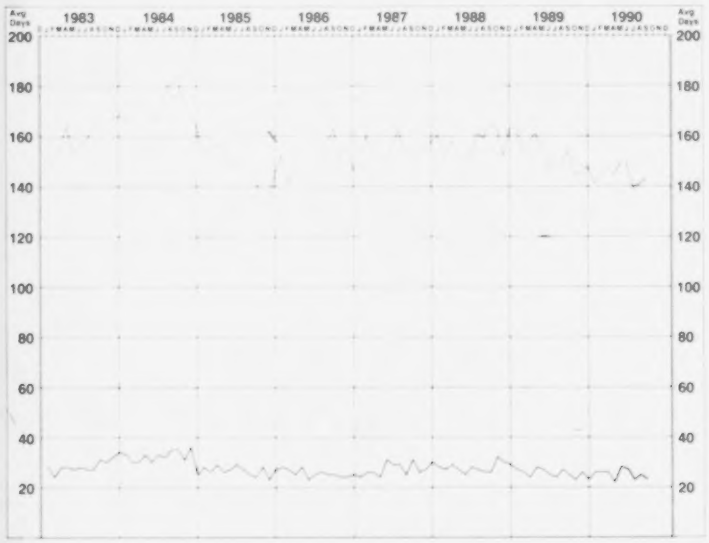
Zinc — 2nd consecutive month, after being reported up in price in July for 5th consecutive month; **Lumber** — 4th consecutive month; **Wood Pulp** — 2nd consecutive month; **Linerboard** — 7th consecutive month (used heavily in making corrugated shipping cartons); **Corrugated Shipping Containers** — 8th consecutive month; **Multiwall Bags** — Heavily used in packaging agricultural and industrial nonliquids; **Solid Bleached Sulfate (SBS) Paperboard** — Used to make folding cartons and backing for forms, checks, etc.; **Methanol** — 4th consecutive month; (used heavily as a solvent, a motor fuel additive and in synthesizing other chemicals); **Zinc Oxide** — After being reported up in price for 2nd consecutive month in July (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **Carpet Staple and Filament** — In particular, stain resistant; **DRAMS** — 4th consecutive month; **Corn** — 2nd consecutive month (used heavily in making sweeteners, starches, and alcohol); **Corn Starch** — Used heavily in both food processing and papermaking; **Corn Sweeteners** — Used heavily in making sweeteners, starches, and alcohol; **Sugar** — 2nd consecutive month; **Orange Juice** — After being reported up in price in August.

BUYING POLICY

Overall buying policy did not change materially in September, with Capital Expenditures lengthening lead times slightly, and Production Materials and Maintenance, Repair, and Operating (MRO) Supplies shortening them somewhat.

The average lead times for Capital Expenditures increased to 143 days, up from 141 days in August, reflecting the continued relative strength in capital equipment.

The average lead time for Production Materials dropped to 46 days, down from 48 days in August and 49 days in July, mirroring the decrease in demand and faster Supplier Deliveries. The average lead time for Maintenance, Repair, and Operating (MRO) Supplies fell to 23 days, down from 25 days last month and the same as in July.

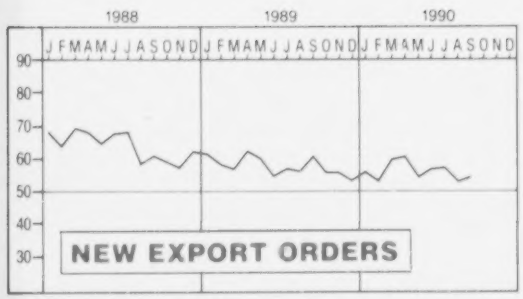


PERCENT REPORTING

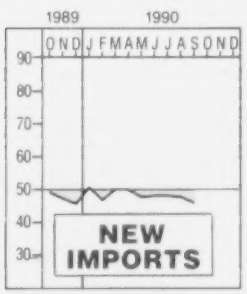
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
September	12	8	12	19	34	15	143
August	13	5	14	23	29	16	141
July	14	4	13	22	33	14	139
June	11	5	14	20	33	17	149

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
September	19	42	24	12	2	1	46
August	20	37	29	10	3	1	48
July	20	38	28	10	2	2	49
June	19	40	28	9	3	1	47

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
September	42	48	7	3	0	0	23
August	46	40	10	3	1	0	25
July	43	44	11	2	0	0	23
June	38	47	12	2	1	0	27



New Export Orders continued to be the brightest star in the economy. New Export Orders increased for the 33rd consecutive month. The New Export Order Index, not yet seasonally adjusted, rose to 54.0%, up from 53.0% in August. The percentage of members exporting rose to 76%, up slightly from 75% last month.



Imports declined for the fifth consecutive month. The Imports Index, not yet adjusted for seasonal variations, fell to 45.5% in September, down from 47.5% in August, and is at the lowest level in nine months (December 1989, also 45.5%). The percentage of members importing increased to 81%, up from 77% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
September 1990	76	20	68	12	+ 8	54.0
August 1990	75	16	74	10	+ 6	53.0
July1990	74	24	66	10	+14	57.0
June 1990	77	20	73	7	+13	56.5

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
September 1990	81	5	81	14	– 9	45.5
August 1990	77	7	81	12	– 5	47.5
July 1990	76	9	78	13	– 4	48.0
June 1990	79	8	80	12	– 4	48.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.